COMMERCE AMERICA
FORMERLY COMMERCE TODAY

U.S. Department of Commerce / July 5, 1976

Resource Management by Aerial Inventory

Newsmemo

It's up, up, up for corporate training and development departments. Business Administration Dean George S. Odiorne has found that 40 percent of such departments now report direct to top management, while 42 percent report to personnel managers. Odiorne, of the U. of Massachusetts-Amherst, believes the shift is due to new emphasis on high-talent manpower, company strategies of humanistic management and priorities on promotion-from-within. Odiorne says Personnel defines a quality employee as one with a collection of credentials, whereas Training and Development views the quality employee as one with the ability to keep on learning.

Sending large amounts of first-class mail to well-defined geographic areas? Then a discount awaits from the U.S. Postal Service, effective July 6, in a move aimed at improving use of the ZIP Code. The rate for pre-sorted first-class mail of 500 or more pieces will go down by a penny for each group of ten or more pieces destined for the same five-digit ZIP address, or a group of 50 or more pieces destined for the same three-digit ZIP. For full information on how to get the discount, contact the nearest U.S. Postal Service Customer Service Representative.

Case-by-case assistance to U.S. firms that seek to market products in Eastern Europe, the Soviet Union and the People's Republic of China. It's available from Commerce's Bureau of East-West Trade. The assistance may range from explanation of techniques that differ from normal commercial practices to arrangement of contacts with appropriate national officials. In addition, the Bureau offers U.S. firms entry into a variety of promotional events designed to introduce firms and products into these markets. The full story is in a new booklet, "An Introduction to the Bureau of East-West Trade," available upon request from Office of East-West Trade Development, BEWT, Room 4823, U.S. Dept. of Commerce, Washington, D.C. 20230.

AF-AFG, DZ-DZA, AR-ARG, AU-AUS, AT-AUT. These are the standard two and three-letter codes for Afghanistan, Algeria, Argentina, Australia, and Austria, taken from lists of designations used instead of country names in the information systems of industrial, trade, professional and governmental units. The codes grew out of international vehicle identifications and with minor exceptions (such as Algeria) are derived from the English-language country names. Copies may be obtained from Commerce's National Bureau of Standards, Office of Technical Publications, Washington, D.C. 20234. Refer to NBS Letter Circular 1067.

The world has all the primary energy it will ever need—getting it to the people is the problem. General Electric R & D chief Dr. Arthur M. Bueche recently stated this view to a Canadian audience. He believes each nation should carry out the energy program best suited to it, and that the total energy solution thus becomes the sum of diverse national efforts. But with such diversity, he warns, free flow of information between nations is all-important: "We've got to tell each other what we are doing and how we are getting along at it."

Coastal Zone Management Act study for Minnesota! Yes, Commerce's National Oceanic and Atmospheric Administration is helping the state support a study of recreational facilities along the northwest shore of Lake Superior. Its grant is a supplement to an earlier one that aids the state in developing a complete management program for its "coastal" areas.

Flue dust, grinding swarf and mill scale, waste products all, can be converted into useful nickel-chromium stainless steel remelt alloy. And a resource-conservation plant to do so will be built in Pennsylvania by International Nickel (U.S.). The project, believed to be the first of its type to reach a commercial stage, is based on a process invented and developed at an Inco research laboratory. Capital investment in the project is expected to be in excess of $25 million.

No end in sight for the calculator market. So believes Richard Farley, who heads the Burndy Corp. that produces connectors for electronic calculator units. The market for pocket calculators went, he says, from 12 million in 1974 to 16 million in 1975, and could reach 40 million this year. Farley sees engineers developing calculators to monitor body functions, for use on phones or in autos, and even alphabetical calculators for language translation or spelling instruction.

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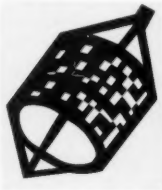

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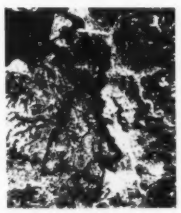

COVER: Aerial photographing of the Pacific Northwest region such as this view of the Puget Sound area of Washington State is necessary to a demonstration project of the Pacific Northwest Regional Commission in inventorying certain natural resources as an aid to management and planning for future usage. Story begins on page 4.

U.S. DEPARTMENT OF COMMERCE

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Fewer Sharp Fluctuations Expected In Rate Of Inventory Growth

Economic Highlights is prepared by Maynard Comiez, Deputy Chief Economist of the Department of Commerce.

In recent quarters, the growth of Gross National Product has been alternately buoyed and retarded by changes in inventory investment. Now, it appears that growth of GNP in the immediate future will more closely follow the pattern of final sales. During four quarters of economic recovery, business reaction to increasing sales, decreasing inflation, and other changes in the economic environment has brought inventories fairly close to the desired relationship with sales.

Since inventories represent a very volatile form of investment, they tend to make up or down movements in GNP much more pronounced when the economy is at or near a major turning point. Inventories represent an adjustment factor in these accounts so that GNP can be derived from final sales. Excluding the effects of foreign trade, inventory investment is the change in inventories that results from the difference between production and sales during any given time period.

For example, if inventory investment amounted to $10 billion in consecutive quarters, there would be a $10 billion difference between final sales and GNP, but there would be no stimulus to growth of GNP from inventory investment. As indicated in Chart 1, it is the increase or decrease in inventory investment (literally the *change* in "Change in Inventories") that affects the amount of change in GNP. Thus, in Chart 1, the change in inventory investment shows up as a plus in the third quarter of 1975 even though, in absolute terms, inventories declined throughout 1975. The stimulus to growth of GNP during that quarter occurred because the liquidation of business stocks was much less than in the previous quarter.

The change in inventory investment contributed a significant boost to growth of real GNP in the first quarter of 1976 when more than $12 billion of inventories were accumulated. It is not likely that the *rate* of accumulation will be increased in the second quarter. Thus, the *change* in inventory investment will be close to zero, and any change in GNP will have to be achieved from the change in final sales.

Chart 2 depicts the sales and inventory relationships in manufacturing and trade inventories over the past several years in terms of 1972 dollars. These business stocks generally follow the pattern of inventories in the GNP accounts, even though the GNP accounts also include inventories of nonmerchant wholesalers and farmers.

Businesses experienced an inventory-to-sales ratio (I:S ratio) of 1.73 in the first quarter of 1971, which was the initial stage of recovery from the 1970 recession. As sales continued to improve, the ratio fell to an average of about 1.58 during 1973. During the inflationary surge in 1974, businesses accumulated stocks to avoid price increases that were anticipated later in the year. Shortages in some areas encouraged even greater inventory accumulation as a hedge to guarantee continued production. At the same time, inflation led to an erosion of the real income of consumers. A number of events occurred, such as the oil embargo, gasoline shortages, and the like, which combined to reduce sharply the confidence of consumers, and consequently their purchases. Even with production cutbacks, the sharp decline in sales resulted in a surge in inventories. The I:S ratio soared to 1.87 in the first quarter of 1975. An upturn in sales, coupled with inventory liquidation throughout 1975, reduced this ratio to 1.69 by the first quarter of this year. The ratio is still higher than ratios in the 1972-1973 period.

An examination of manufacturing I:S ratios helps support the notion that a little further downward adjustment is likely. Retail and wholesale trade inventories comprise about 45 percent of total manufacturing and trade inventories. Chart 3 plots the overall I:S ratio for manufacturing, along with its three components. These ratios are not adjusted for price increases because constant-dollar data for the components are not available. The chart shows that the overall I:S ratio for manufacturing has returned to an amount slightly higher than the 1973 average.

There is some variation in the ratios of components of manufacturers' inventories. The ratio for work-in-progress inventories is lower than at any time in the last five years, while the ratio for finished goods inventories has nearly returned to the 1973 average. Inventories of materials and supplies seem high in relation to sales. This ratio may be affected by the change by many firms to an accounting technique for inventory valuation that gives a more current, and therefore higher, valuation for inventories. The I:S ratio for manufacturers' materials and supplies may not be reduced to the low achieved in 1973. At the same time, the high costs of maintaining inventories in terms of interest costs has led to the adoption of better inventory control techniques which may permit a further reduction in physical inventories relative to sales.

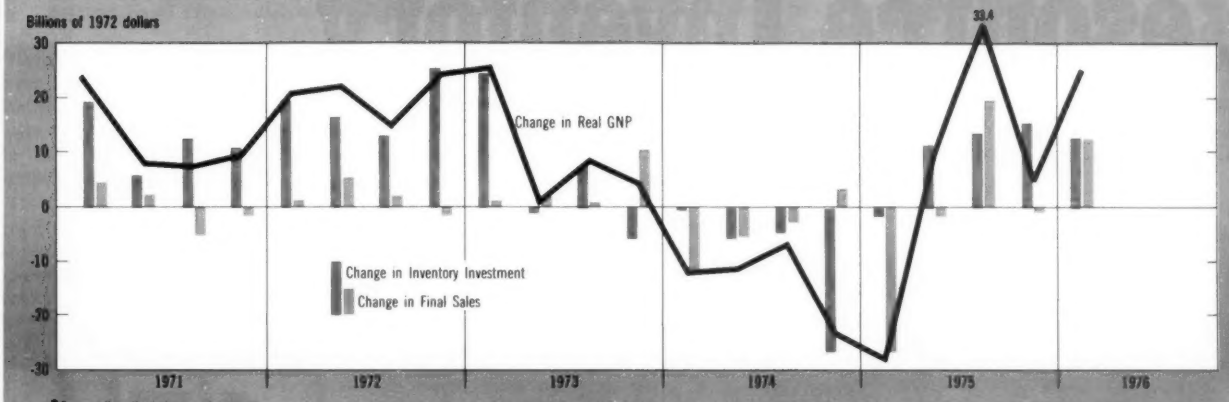
A recent survey of manufacturers' anticipations, conducted by the Bureau of the Census, indicated some further reduction in the I:S ratio for manufacturing. For the second and third quarters of 1976, these firms expect some increase in inventories, but this will be more than offset by a slightly faster increase in sales.

It should be noted that an overall figure showing inventories at an appropriate level does not preclude the possibility of tight supply situations or an overabundance of stocks in some industries.

In summary, the inventory to sales ratio, in constant dollar terms, is still at a higher level than was maintained in the previous recovery. Only a stronger-than-expected rise in sales would lead business to attempt an increase in the rate of inventory investment on the scale of the first quarter. Indications are that inventory accumulation in the second quarter will be somewhat less than in the first quarter. Thus, the growth of GNP in the second quarter will depend entirely on increases in other economic areas.

Inventories, Final Sales, and GNP (Constant 1972 dollars)*

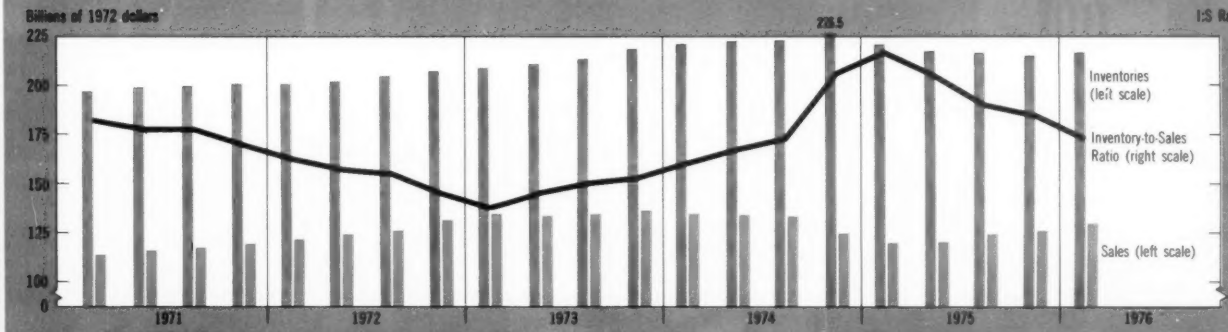
1



*Seasonally adjusted annual amounts

Manufacturing and Trade Sales and Inventories** (Constant 1972 dollars)

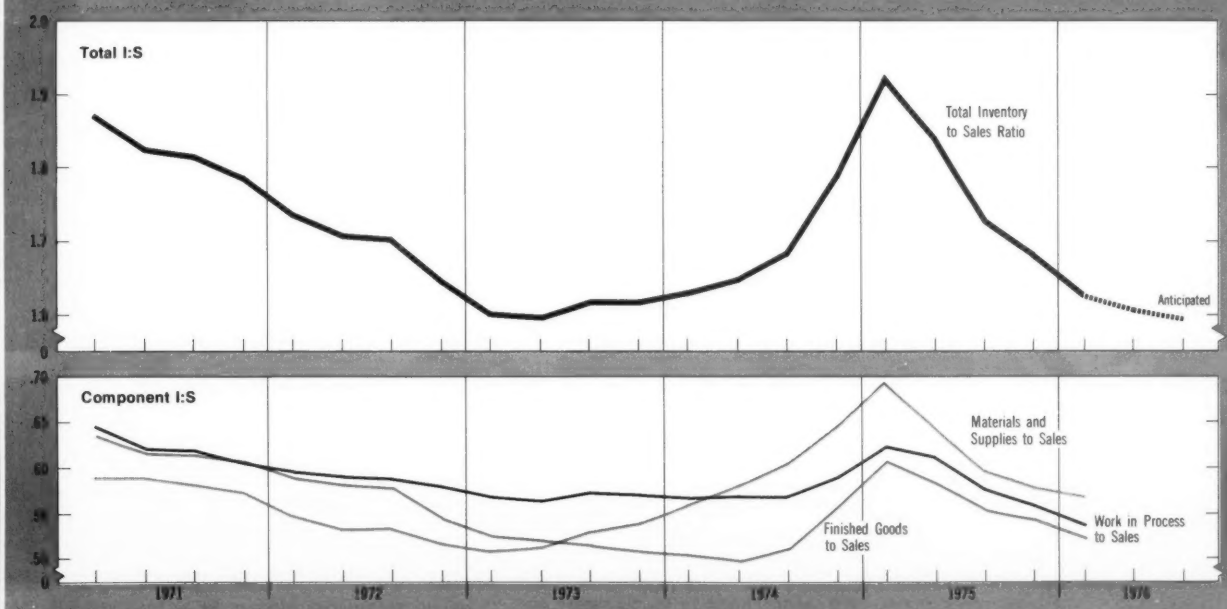
2



**Sales are seasonally adjusted quarterly averages at monthly rates.
Inventories are seasonally adjusted end-of-quarter data.

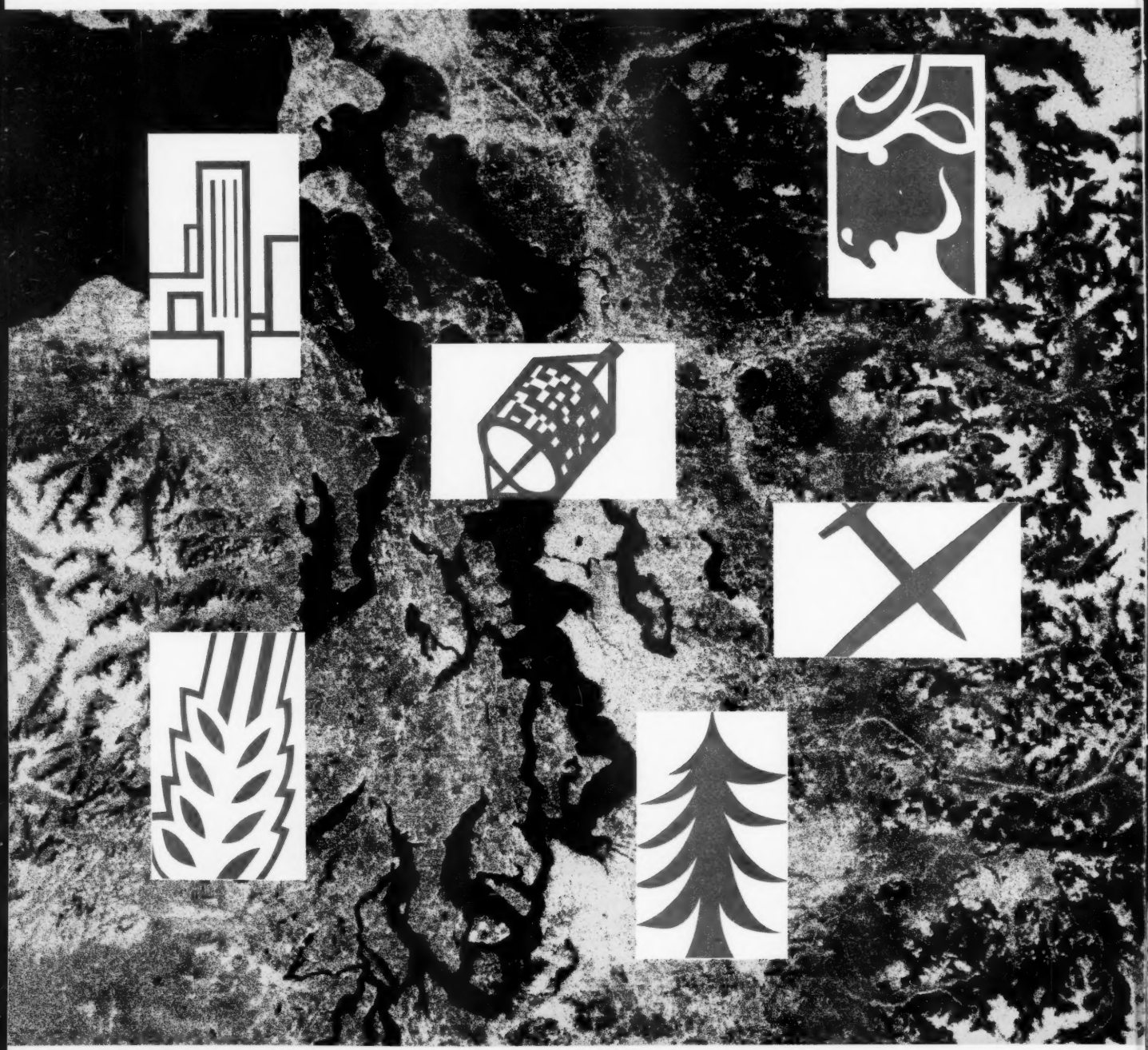
Inventory to Sales Ratio in Manufacturing (Current dollars)

3



Resource Inventory

HELPS STATES FACE COMMON PROBLEMS



The Pacific Northwest's economy is getting a helping hand from hundreds of miles out in space.

Remote-sensing satellites and U-2 photographic aircraft closer to earth are helping the Pacific Northwest Regional Commission (PNRC) demonstrate the usability of remote sensing to strengthen the natural resource planning and management capabilities of the region.

If the program yields the hoped-for economic benefits, its future nationwide implications are enormous.

Several major events led to the realization that regional approaches were required to solve many of Idaho, Oregon and Washington's common problems. One was the failure of the Congress and the Administration to agree on an energy policy. Another was the unsteadiness of markets for the wood products which are among the Northwest's primary assets. Growing fears about possible water shortages in an area that always thought it had limitless supplies of water were another.

Even though diversified manufacturing and services have greatly expanded in recent years, the economies of Oregon, Washington and Idaho still rely heavily on agriculture, lumber, paper, and food processing.

This heavy economic dependence on resources makes the Pacific Northwest susceptible to two adverse characteristics common to resource-oriented industries: long-run secular decline in employment opportunities and recurrent boom-or-bust cycles.

A state-by-state approach to many of these problems clearly would have been slow at best and duplicative at worst.

So, more than 35 state and local agencies, five major state universities, NASA and the Department of Interior have joined together under PNRC sponsorship in a project using space-age technology to inventory the area's natural resources.

Promising initiative

One of the most promising initiatives to result from this cooperation is the Land Resource Inventory project. Under this program, two Landsat satellites developed by the National Aeronautics and Space Administration view the Pacific Northwest electronically every nine days from an orbit nearly 500 miles high. Each satellite then produces digital images which represent the amount of light being reflected in various wave-lengths. Since different types of soil, vegetation, housing and other objects reflect different amounts of light, these images, when analyzed with the aid of a computer, provide economic information about the earth's surface.

Combined with high-altitude aerial photographs and selective checking at ground level, this method may provide very reliable information for management planning and decision making.

In selected areas of each state, the project is exploring possible economic applications of this remote sensing technique in four disciplines—forestry, agriculture, rangeland and urban development. Early indications are that the potential for both monetary savings and improved resource management in each of these areas is exciting.

This Demonstration Project is not only to illustrate the application of remote sensing technology, but equally important to transfer the technology to state and local agencies in the three states. Additionally, the project will investigate the establishment of an operational information system at a center in the region which will permit the large body of potential users in state and local government, in the business community, and in educational institutions to be directly involved in utilizing and evaluating this new technology.

The forestry study, for example, will provide an accurate inventory of timber volume in the areas selected for study, in addition to modernizing procedures that have been highly labor-intensive and not very accurate. Project directors point out that, for the first time in the history of the nation, it has the prospect of accurately determining if it is cutting its forests more rapidly than regrowth is occurring.

. . . the project is exploring possible economic applications of this remote sensing technique in four disciplines . . .

For agriculture-related industries, the acreage of different crop types can be determined, as well as an accurate count of irrigated versus non-irrigated croplands. This could contribute to more rational use of available water and more efficient management of the total crop.

Moreover, the project is using the satellites to help the livestock industry reduce cattle deaths by identifying the location and spread of Tansy Ragwort, a noxious weed. By determining range condition and productivity, the satellite can help this industry adopt more efficient stocking and grazing practices.

The urban discipline is centered on determining the amount of undeveloped land within city boundaries and assessing the rate at which urbanization is encroaching on prime agricultural and forest lands. To the urban planner, businessman and citizen, this means more efficient and economic land use.

However, to date the project has involved primarily the representatives of governmental bodies and universities. According to Jack O. Padrick, the Federal Co-Chairman of the Pacific Northwest Regional Commission, "What we are doing now is trying to demonstrate the worth of remote sensing. When we complete the demonstration projects, then we'll have some concrete data involving benefits and costs that we can take to businessmen to encourage their participation."

The demonstration projects are not due for completion until the summer of 1978, but "we're already beginning to get good indications that the process will be cost effective."

The Commission's emphasis on regional cooperation is not confined to space vehicles, however. The PNRC is concerned with the overall economic development and well-being of the three states of the region. The members of the Commission are: Governor Cecil D. Andrus of Idaho, Governor Daniel J. Evans of Washington, Governor Robert W. Straub of Oregon, and Federal Co-chairman, Jack O. Padrick.

Ahead of the game

The Commission, which was created in late 1972, realized very early the need for a sound regional energy policy to deal with expected future energy shortages. To initiate such a policy, Washington State University was selected to conduct a regional energy analysis and evaluate alternate energy sources. Shortly after this first comprehensive

The Commission realized very early the need for a sound regional energy policy . . .

analysis of Pacific Northwest energy began, imports of Middle East oil were curtailed, leaving the region in the lead in planning for survival in an oil-short world.

Now the Commission is expanding on the original policy study and sponsoring a two-year one million dollar analysis of the social, environmental, and economic impacts of alternative state and regional energy policies. This analysis is carefully investigating energy demand and supply relationships, energy conservation, contingency planning and institutional arrangements affecting energy production, distribution and consumption. The product of the analysis will be a display of the alternative policies and tools available to the Governors and legislators for use in effecting energy development and a careful discussion of the impacts on society, the environment and the economy of implementing each of the policies.

The need for coordinated management of the Columbia Basin has been realized only recently. Because of the abundance of water in the Pacific Northwest's largest river basin, it has often been considered a limitless resource. Virtually all available hydroelectric sites have already been developed. Municipal, industrial and irrigation water usage competes with fisheries resources requirements for available water. In addition, the trend toward nuclear electric power production in the basin, which requires vast amounts of water for cooling purposes, is expected to place further demands on Northwest water resources.

Under the aegis of the Commission, the three states organized meetings to reopen discussions of a Columbia River Compact that would coordinate management of the region's largest fresh water resource. The Commission has also placed high priority on salmon and steelhead fish resource problems. Heavy emphasis has been given to this resource because of its rapid recent decline.

In an area combining both energy and water problems, the Commission began a project to find a use for the millions of gallons of heated water discharged by nuclear power plants each day. For a variety of reasons, including damage to the fisheries resources shared by the three states, it is undesirable to return this heated water directly to the Northwest's major waterways.

The likelihood of the development of still more nuclear power plants in the region makes it much more necessary to find a solution before the area's agricultural and fishing industries suffer major harm.

Under a two-year program developed by the Commission, a research effort is being undertaken at Hanford Atomic Works, the site of several nuclear-fired electric power plants.

In cooperation with the Energy Resources and Development Administration, the State of Washington and several Northwest colleges, 900 acres was leased for the study of warm water use for agricultural purposes. The project involved soil tests, irrigation systems design, environmental analysis and institutional arrangements. The result of this research could provide for use of a presently wasted resource.

The Commission's international trade program has helped stimulate the Northwest's industries by expanding their overseas sales. A Commission-funded study looked into the means for enhancing regional productivity through foreign trade, and, based on its recommendations, the Commission has singled out several specific foreign trade targets—Southeast Asia, Japan, Korea and Taiwan.

Major efforts to date have focused on finding export markets for finished wood products and agricultural commodities—both raw and processed. Japan has been the focus for marketing of finished wood products since recent changes in Japanese building codes and lumber standards now make marketing of U.S. lumber and plywood in that country more feasible. Commission members, in cooperation with forest industry representatives, led a trade mission to Japan in the fall of 1975 to discuss use of U.S. building materials with Japanese government, labor and construction industry officials.

International marketing of agricultural commodities and foods has concentrated on both Asia and the Mid-East. The Commission has coordinated participation of regional food processors in food shows held in Tokyo, Osaka, and Kuwait.

People projects

One of the first projects begun by the Commission after its inception was an alternative futures program aimed at tying together citizen involvement planning efforts in the region's member states.

Three approaches were followed. First, state support grants were provided each state for assistance and coordination of Commission projects. Second, funding assistance was provided to the major planning agency in each state to expedite citizen involvement programs. Third, a comprehensive planning process was begun using consultants and state economic development agencies.

Although program emphases have varied between states, the expected benefit will be a set of citizen-developed goals to direct state, regional and federal investments in each state.

A Commission-sponsored human resources development project could have a significant impact on the region's economic loss due to recidivism by prisoners in state penal institutions.

The program demonstrates the coordinated application of vocational training to state prisons in the three Pacific Northwest states, the objective being to reduce return rates among first-time offenders by providing vocational skill training and job placements.

Program emphasis includes expansion of vocational training programs in landscaping, horticulture, auto body repair, small engine repair and automotive service.

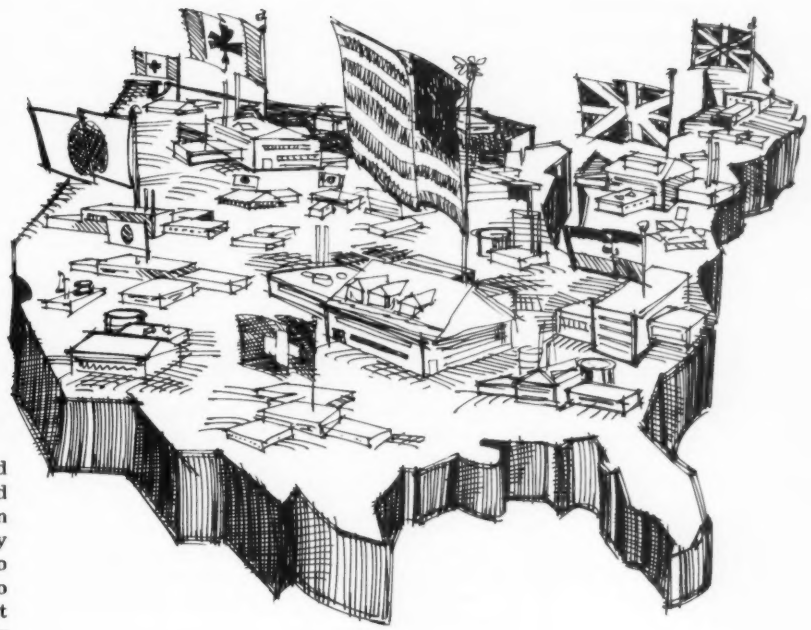
Stress is also placed on vocational education of inmates at local community colleges, rather than within correctional institutions. Available resources were brought to bear to aid individual inmates in selecting a training program, receiving training and obtaining a job.

A demonstration project provided training for 175 residents of Idaho, of whom 173 were employed in their field of training. The project helped residents of the Pocatello, Idaho, area qualify for jobs created by the recent development of a heavy manufacturing firm there.

From 500 miles out in space to within the walls of their prisons, three states are combining their resources to achieve common economic goals. ☆

Those Foreign Investors

Tell Why They Came



In a corporate boardroom abroad the decision had been reached: acquire an affiliate in the United States. The go-ahead came out of agreement on various points by the directors. Their firm, they felt, was now big enough and strong enough to consider the venture, it was ambitious enough to attempt it, its experience in world trading gave it confident knowledge of international financing and U.S. marketing, and—a timely consideration—the opportunity to purchase assets priced in devalued dollars appealed to the directors' bargaining instincts.

The scene emerges from a section entitled "Investment Motivation" in the new Commerce Department study on foreign direct investment in the United States. The study not only describes the extent, nature and significance of such investment (see *Commerce America*, May 10, for a summary report), but explains why it burgeoned in the decade of the '70s.

For this part of the overall investigation, the Commerce Department commissioned the Arthur D. Little, Inc., research firm to conduct confidential personal interviews last summer with executives of foreign parent companies that had undertaken direct investments in the U.S. Companies from Germany, the Netherlands, Switzerland, the United Kingdom, Canada and Japan—the nations represented in four-fifths of U.S. foreign direct investment—were selected. The 72 interviews were supplemented by 40 others held with leaders of international investment and banking institutions and government agencies.

The boardroom scene sketched above dramatizes the conclusion reached by the interviewers that the upsurge in foreign direct investment in the U.S. has been the product mainly of the following factors:

- Growth in financial and competitive capabilities of foreign corporations within their own economies over the last decade.
- Increasing undervaluation of major foreign currencies from 1965 into the '70s, which made foreign exports more cost-competitive in U.S. and third-country markets and contributed to the growing strength of companies abroad.
- Increasingly ambitious growth objectives for foreign multinational firms, including expansion of markets, product diversification, and complete control of production from raw materials to market.
- General world economic and political developments which have increased the attractiveness of the U.S. as a corporate investment site, including shifts elsewhere in labor costs and attitudes, and restrictions abroad, actual or feared, to free enterprises.
- Depressed U.S. stock market values during 1973 and 1974, the period prior to the conducting of the survey.
- Explosive expansion in business activity among the industrialized nations, opening the way for firms to satisfy foreign market demand and acquire valuable international financial and marketing experience.
- Trends toward mergers and consolidations in Western Europe and Japan in the late '60s which helped foreign firms exploit economies of scale in production, marketing, research and development.
- The 1971 and 1973 dollar devaluations and subsequent foreign currency realignments. In five of the six countries under study, investors could now buy, on average, 35-40 percent more in dollar-denominated real assets for the same amount of national currency.

Until recently the appeal of the U.S. as a corporate investment site had been based primarily on the relative size and growth potential of the big American markets. Since 1972 such developments as foreign labor unrest, uncertain raw materials availability, unsympathetic foreign government regulatory policies, and the prospect of declining export competitiveness abroad have entered the balance as foreign corporations weighed

The swiftness of the increase in foreign purchasing power had a strong psychological impact.

the U.S. against alternative investment sites.

Looking ahead, executives of foreign corporations told the Arthur D. Little interviewers that the U.S. probably will receive an increasing share of worldwide direct investment flows over the rest of the decade of the 1970s. Compared to alternative markets, they expect the U.S. to provide better profits, faster productivity growth, less labor unrest, increasingly more favorable labor costs, less governmental intervention, greater investment security and improved security of materials supply.

However, on a worldwide scale, foreign investment activity is expected to remain depressed through 1976 by delayed economic recovery in the industrialized nations, according to foreign executives. Some further estimates from the same interviews are:

From 1977 to 1980, the level of foreign direct investment activity will be dependent primarily on worldwide economic recovery and an alleviation of present corporate liquidity problems. Such activity in the U.S. is not expected to match the 1971-74 pace due to probable slower European and world economic growth, present uncertainties of the international monetary system, the inflationary tendencies of Western economies, leveraged corporate and banking debt structures in almost all industrialized nations, and the unknown world monetary impact of the surpluses in the oil-producing nations.

German and Japanese corporations are expected to produce the greatest increases, among the nations studied, in foreign direct investment activity in the U.S. The busiest industrial fields for such activity are expected to be petroleum, chemicals, food, primary and fabricated metals, lumber and paper, electrical machinery, electronics and nonelectrical machinery. These are the same fields in which foreign direct investment has been significant in the past.

Massive direct investment in the U.S. by the Middle East oil-producing nations is not considered likely through 1980. While Saudi Arabia, Kuwait and Iran will have the greatest potential for undertaking such activity, the bulk of their long-term activity is expected to be directed into government and corporate securities and portfolio purchases of corporate equities. Direct investments will be limited, for the most part, to income-earning real estate and selected purchases of minority shareholdings in industrial and financial corporations. These corporate acquisitions will be made to gain specific technological, managerial and financial expertise required by Middle East investors for domestic development and effective worldwide utilization of their surplus funds.

The interviewers found, not surprisingly, that the dollar devaluations of 1971 and 1973 played a major role in foreign investment decisions since they created a huge expansion in the ability of foreigners to purchase U.S. real assets. But it was not merely the fact of the currency realignment that brought the dramatic increase in investment activity. The swiftness of the increase in foreign purchasing power, coming after a long period of relative undervaluation, had a strong psychological impact on corporate investors, particularly among the Japanese and some of the less conservative European managements. This "rush-to-invest" psychology was reinforced by the optimistic investment outlook shared by a great many foreign corporate managements riding a simultaneous boom cycle in the world's major economies—a psychology subsequently dampened by the Arab oil crisis in late 1973 and worldwide recession in 1974-75.

Both an "offensive" and "defensive" attitude was found among foreign corporate managers as they weigh plans to establish or acquire U.S. affiliates. The managers simply cannot ignore the size of the U.S. market in virtually every industrial sector. To some, planning aggressive expansion, this represents opportunity to exploit favorable conditions; to others, facing unfavorable conditions at home or elsewhere, a move to the U.S. is almost a forced alternative. In many cases, the impulse to invest in the U.S. is seen as having both offensive and defensive elements.

Foreign corporations, contending with leftward trends in governments and among their workers, have responded with efforts to lower their risk exposures through geographic diversification. For this purpose the U.S.—because of its size, political stability, and generally favorable attitudes toward free enterprise—has been a most desirable location. Foreign corporate managements repeatedly spoke of the U.S. as the "last bastion of capitalism" or the "last stronghold of free enterprise." When asked if they had made direct investments in the U.S. solely on the basis of the relatively lesser political and economic risks, most executives replied in the negative. But when these considerations were combined with other incentives, such as potentially large markets, they tended to be decisive.

The closing of the labor cost gap between the United States and other industrial nations was not considered to be a decisive factor in moving productive facilities into the U.S., though it was regarded as an added incentive. Some corporate decision-makers explained that labor cost considerations, while growing more important, could not be used as a basis for action because of the difficulty of predicting future relative trends in productivity and wage increases. Cost considerations, in fact, were given only secondary importance by most investment decision-makers.

A German manager contended: "The impact of dollar devaluation on production costs has not been a reason at all in our investment decisions. Neither have labor costs. Who can tell whose currency and wages will be higher in ten years? German companies must be active in America because Americans are active everywhere else."

Several German executives remarked further on the overriding importance, for them, of keeping up with American standards. One said: "Without being able to compete successfully with highly efficient and progressive U.S. firms for the American customer, industrial companies based in other countries would inevitably fail in their efforts to maintain their business posture in other industrialized countries as well as in their own home markets." Another made the same point: "Indications of future sales trends and of technological changes or product innovations can be recognized much earlier by companies well integrated into Ameri-

can business life compared to those trying to compete from abroad and having to orient their market strategy and development programs on domestic indicators only."

The bulk of Canadian direct U.S. investment has been concentrated among a small number of large firms in primary resource industries, and future activity is expected to be heaviest in these industries. Japanese foreign direct investment activity has been concentrated in the service sector, as corporations have moved outward mainly to support export expansion or to provide control over raw material sources. Essentially this is an adaptation to negative economic pressures on the Japanese economy rather than an affirmative-looking strategy to exploit positive advantages offered by U.S.-based operations.

The Arthur D. Little team reported the following comments from the Netherlands as helpful in explaining the investment attitude of Dutch business executives:

"We plan to step up investments in the United States. In recent years we've been somewhat dissatisfied with our U.S. performance, and this has probably been due to a presence which is too small to fully exploit market opportunities. Therefore, we'd like to broaden our U.S. product line through further acquisitions in known fields. We'll be focusing on improved profit performance rather than sales expansion just for expansion sake."

"Labor in Holland has simply become too expensive. Rather than expand domestic plants, we'll probably move into the United States."

"Our company is planning a major expansion in the United States over the next three years or so. We'll be looking mainly to reduce our vulnerability to business cycles, spread our risks a bit more, and enter new markets with above-average growth potential. Return on sales in our U.S. operations has been significantly above our operations in Europe in recent years. We like to operate with local participation in the United States."

The attitude in Switzerland toward direct investment in the U.S. is reflected in several personal comments made to the interviewers. A director of a major Swiss industrial company declared: "At the present time we only have a servicing facility in the U.S. This was a satisfactory arrangement until 1972. With the Swiss franc appreciation, we now have a 30 percent competitive disadvantage in exporting to the U.S. Furthermore, because of the complexities of our product line, we have found that our American customers cannot provide us a continuing supply of orders unless we have a U.S. production operation. We have been evaluating such an investment on and off for the past five years. The market potential looks favorable but the investment required is huge. We will probably delay any such investment until the overall economic environment is more certain. This is a particularly difficult decision for us in light of a major direct investment we made in the U.S. in 1929 and lost."

A president of medium-sized Swiss company commented: "Our product is highly technical. We found that a distributor could not properly service and protect our brand name. Although the U.S. is only 5 percent of our business, we established a new subsidiary in 1970 and expanded it in 1973. However, I don't know if we will increase our investment. The U.S. market is much more difficult than the European market. The U.S. customer expects more servicing than the European customer and doesn't think twice about cancelling orders."

The impulse to invest in the U.S. is seen as having both offensive and defensive elements.

Interviews in Britain tended to emphasize the importance of foreign investment activity as a response to current domestic problems. The British were seen also as the most aggressive in undertaking recent major acquisitions. This is regarded as partly due to the close familiarity of the British with the American business scene. But the apparent British ability to make corporate decisions more rapidly than their Continental neighbors is also a factor here. In one classic case, British management learned, in the space of two weeks, that a retail business was available, decided to make an offer, processed the papers, raised the capital and made the offer leading to the purchase. A London banker commented: "The British can move as fast as the Americans when they want to."

The managing director of a British machinery firm explained an acquisition in terms regarded as typical: "We wanted to expand our U.S. sales, but exporting was out of the question because of the transportation costs for our product and because we knew customers would be unhappy without a local delivery and servicing capability on our part. Ultimately it came down to a question of 'if we can't produce in the United States, then we can't sell there.' But we didn't want to spend five years building up a decent sales and servicing network. So we looked for someone in the United States who had compatible management and the facilities we needed."☆

Investment Study Ready

The Commerce report to the Congress, "Foreign Direct Investment in the United States," is now available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Volumes 1 and 2, the Secretary of Commerce's report, comprising the general analysis, conclusions and recommendations, and a 132-table benchmark survey, are being offered as a unit at $6. The other volumes, containing 18 appendices, may be purchased for $30.25 or at the following individual prices:

Volume 3, on Industrial and Geographic Concentration of Foreign Direct Investment, $4; Volume 4, on five areas: Energy, Selected Natural Resources, Commercial Fisheries, Grain Trade, and Banking, $2; Volume 5, on Investment Motivation, Financing, and Management and Labor Practices, $7.

Volume 6, on Taxation, $4; Volume 7, on Federal and State Law, $5.40; Volume 8, on Foreign Investment in Land, and Land Law, $4, and Volume 9, on Policies and Laws of Other Countries, Transfer of Technology, Accounting, Federal Agency Sources of Data, and a Bibliography, $3.85.

Energy Digest

GOING UNDERGROUND . . . The Philadelphia Electric Co. is now working under a $226,000 contract awarded by the Energy Research and Development Administration to evaluate the economic and technical viability of various underground power transmission systems. This study is of special significance, as researchers predict it will be necessary to transmit large blocks of power into densely populated urban centers for use in homes, businesses and industry. Underground cables may be the only alternative in congested areas. By 1985 it is possible that there will be large "energy parks" generating over ten million megawatts of power located 40 to 100 miles from major electric consumers.

SYNTHETICS ON THE WAY . . . An energy expert predicts that synthetic gaseous and liquid fuels from coal and other fossil sources may achieve significant commercial development in the United States despite complex investment, regulatory, and legislative barriers. Jack Huebler, of the Institute of Gas Technology in Chicago, said "On behalf of synthetic fuels, it is easily shown that, starting with the same coal source, the advantage of the much higher conversion efficiency, the higher load factor associated with a cheaply storable product, and the much lower transportation and distribution costs, synthetic pipeline gas–or synthetic fuel oil–is a much better buy than electricity for heating loads even though the utilization efficiency of the synthetic fuel is less than that of electricity."

LENDER'S INSURANCE . . . ERDA has issued regulations governing the geothermal loan guaranty program—the first federal loan guaranties aimed at speeding-up the commercial development of an energy resource. The program is designed to spur the flow of credit necessary to permit reservoir developers and electric utilities to undertake geothermal projects. A total of $200 million in loans is expected to be guaranteed during the next twelve months. "The program provides financial insurance for the lender," according to ERDA Director Dr. Robert C. Seamans Jr. "This goes hand-in hand with the technical and research help which ERDA provides to the borrower." The Manager of ERDA's San Francisco Operations Office will evaluate and process all guaranty applications. A copy of the final regulations and more detailed information on the geothermal loan guaranty program is available from Robert D. Thorne, ERDA Operations Office, 1333 Broadway, Wells Fargo Bldg., Oakland, Calif. 94612 (415-273-7881).

ELECTRIC EYEBALLS . . . Plastic "eyeballs" that follow the sun may become a new way to tap solar energy under a development program sponsored by a British unit of ITT. The Standard Telecommunication Laboratories in Harlow, England, are developing the "eyeballs," which are basket-ball sized spheres containing lens arrangements that focus sunlight on solar cells which then generate electricity. All components are sealed inside the "eyeballs," which float on a bath of water. Each of the "eyeballs" can generate up to one volt, but more can be generated by using several together. STL researchers emphasize that the device is still under development, and cannot forecast when it might be offered for sale. However, they estimate that, for a peak output of one kilowatt (the consumption of the burner on an electric stove), the installed cost would be from $650 to $1,000.

SOLAR BOILER . . . The first U.S.-built power plant boiler designed to be heated by sunlight will be tested in France this summer at the world's largest solar energy test facility, under a new agreement between the U.S. and France. The boiler already has been tested satisfactorily under electrically-simulated solar conditions in a facility at ERDA's Sandia Laboratories in Albuquerque. France will provide experienced operators and use of the unique facility for the test without charge, while the U.S. will provide the boiler and the necessary ancillary equipment. The two countries will share the data resulting from the testing, which will be conducted from June through August. By late 1980, ERDA expects to have in operation a pilot plant that uses boilers heated by concentrated sunlight to produce steam to drive a conventional turbine and generate 10 megawatts of electricity. Ten megawatts is approximately enough power to serve a town of 10,000 population.

NUCLEAR QUALITY ASSURANCE . . . The Nuclear Regulatory Commission staff is planning a comprehensive, independent assessment of its activities related to the review, approval and inspection of quality assurance programs at commercial nuclear power plants. The study will be conducted by Sandia Laboratories of Albuquerque.

Credibility Issue Seen Crucial To U.S. Firms

ENERGY CRISIS REVEALS PUBLIC'S SKEPTICISM; GIVES BUSINESS CHANCE TO RESTORE TRUST

Secretary of Commerce Elliot L. Richardson gave his views on the energy situation and the challenges and opportunities it offers to American business at the National Energy Forum held recently in Washington's Shoreham Americana Hotel. He sees it as a chance to restore the highest ethical and moral standards to the conduct of business.

Other issues come and go in the newspaper headlines, but energy is there almost daily—and may continue to be for decades.

It is the nature of this hydra-headed beast that there are simply no sure-fire, one-shot solutions that can slay him. Indeed, there's no such thing as a single energy problem. Instead, we are confronted with a whole complex of interlocking problems:

—technical, legal, economic, environmental and human problems;

—in the time span: long-, short- and intermediate-range;

—and both domestic and international in scope.

There's hardly an equation involving human existence in which energy is not a major factor.

The success of any policy or program depends, in the final analysis, on the people's understanding, trust, cooperation and support. Nowhere is this truer than in the case of energy. Its pervasive nature, threading the whole fabric of the lives of our people, makes public support the essential ingredient of the whole national effort. We need the individual's cooperation in conserving energy because every individual is an energy consumer; and we need public support for the right policies and programs both because cooperation is needed for their success and because many involve the expenditure of tax dollars.

But to merit public support, we first need public understanding. We can hardly expect people in this era of participatory democracy to accept some of the hard choices and inconveniences required by the situation without a thorough understanding of the whys and wherefores.

And what is the public perception of the energy problem?

Opinion surveys by the Federal Energy Administration reveal a disturbing picture.

Most people, it seems, do understand that the problem in general is one of supply and demand: that energy resources are "being used up;" that there is "wasteful usage" of energy; that there is a "need to conserve."

And they seem to favor measures—especially in the abstract—that promote energy conservation. They say they want more specific information on how they can save energy. They like the idea of appliance labeling, for example, and information on the fuel efficiency of autos.

But take the latter: For a time last year, it looked as though the trend to sub-compact cars was headed nowhere but up. Today, their percentage of sales has declined significantly.

Or take carpooling, a measure that would provide some of the most significant savings of all. A recent survey showed only 10 percent of the people carpooled to work, while 69 percent drove their own car—alone.

Gluttony back in style

Today, gasoline is being consumed at a rate more than 7 percent higher than last year.

As *The New York Times* commented recently, "The simple and regrettable fact is that the United States has fallen back onto the carefree energy-consuming binge that only the shock of the Arab oil embargo succeeded in interrupting in 1973."

The memory of the long lines at the gas stations that winter seems to have faded completely from the public consciousness. Surveys indicate that only five percent of the people realize that the heart of the energy problem is U.S. dependence on foreign sources of oil. This, despite the fact that imports of foreign oil now represent about 40 percent of U.S. consumption, up from 36 percent when the oil embargo began in 1973.

During one week in March this year, for the first time in this nation's history, it imported more crude oil and petroleum products than it produced. For the past six years, domestic production of crude oil has declined steadily. It is around a million barrels a day lower now than it was at the start of the embargo.

But the most disturbing of all the findings about public attitudes was the skepticism and cynicism among the American people.

In recent panel discussions conducted by the Gallup Organization, even those who accepted the reality of an energy problem felt that they had been manipulated and exploited. Some blamed the "oil companies." The view was expressed that the crisis was concocted in order to get gasoline prices raised. The abundance of fuel now that the increases are in effect was cited to support this view.

Other panel members criticized what were termed "ineffective or counter-productive" government policies.

Feel they've been 'had'

"But virtually everyone," a report of the discussions said, "felt that in some way they had been 'had.' Thus a general suspicion of being constantly lied to pervaded much of the discussions."

Such attitudes, the report concludes, emphasize the need for a "meaningful, credible explanation" to the people of the energy problem. The report adds:

"Without progress on this level, the prospects for success of any long term energy conservation campaign must remain dim."

Of all the problems we face in the energy area, this seems to me the most serious.

We can continue to supply more information on energy saving measures for the householder and the driver and we can continue to promote conservation by industry—which already is effecting very substantial savings. We can legislate pricing policies that encourge exploration for oil and gas on the Outer Continental Shelf. We can step up development of our vast coal deposits. We can provide the environmental safeguards for these activities. We can launch great scientific

MORE THAN EVER—*Despite repeated warnings and appeals for conservation, imports of foreign oil now represent about 40 percent of U.S. consumption, up from 36 percent when the oil embargo began in 1973. Only 10 percent of U.S. workers are in carpools, and gasoline consumption is up 7 percent above last year.*

and technological projects to ensure development of energy sources for the long-range.

None of these are simple or easy or can be done overnight. Vast resources and skills are required. But they all represent the kind of challenge this nation has been meeting successfully for two centuries.

The problem of credibility, however, is of a different character and scope. And it is not confined just to energy but includes policies and issues of all kinds, and extends beyond government and business to many other institutions.

We don't have the evidence that opinion polls throughout our history could provide, but I question whether at any time during the nation's entire existence public confidence and trust in our institutions has been at such a low ebb. And I'm afraid the reason is all too clear: The wounds inflicted on faith and trust during the Vietnam War and Watergate were unprecedented. And they have left deep scars on the public psyche.

The only remedy

There is, of course, only one remedy: the healing balm of truth. The plain truth. The truth that can't be bought and sold. And no half truths that are passed off for the whole truth.

In the case of government, in both the executive and legislative branches, the credibility problem must be addressed by all of us in the political arena. Indeed, we can't escape it. The current Presidential campaign has obviously revealed it as an issue uppermost in the minds of the voters.

But as the highest public official charged with responsibility for promoting the vitality and continued success of free, competitive enterprise, I want to urge business leaders to address themselves also to this critical problem. And I'm not talking about just credibility, but the whole problem of ethical and moral standards, which are so critical to the public's perception of business.

I have been dealing with one aspect of this problem as chairman of the President's Task Force on Questionable Payments Abroad. All of the business leaders I know, especially those who have engaged in making such payments for competitive reasons, are deeply disturbed by this whole affair. They know that the image of business has suffered a heavy blow, and they are ready and anxious to take strong corrective measures through international codes of conduct that create fair rules fairly applied to all.

But let me ask a fundamental question: Why this concern? Why are business leaders so concerned today about the image of business? What has it got to do with production or marketing or research and development or manufacturing or transportation or any other aspect of business operation?

I believe this concern has taken on a new dimension for a very fundamental reason. It is that if the Republic is to continue to enjoy the progress that has characterized its history for two centuries, the burden of national leadership must be more fully shared between the private and public sectors. I believe that among those in the private sector, business leaders are perhaps best able of all to shoulder a far greater share of this burden.

I think we all know what is behind the need for this more fully shared leadership: The new realization that the Federal Government is simply unable to meet the growing multitude of responsibilities generated by the complexities of advanced industrial society.

Government can't do it

Try as it might—and it does try—government is unequal to the task—no matter how big it gets, how many bureaus it creates, or how much red tape it spins out. Indeed, it often just adds to the chaos. It can waste resources. Some of its proliferating rules and regulations can stifle innovation. And the billions of dollars it spends don't always achieve their purpose.

All of this means, I think, that we must have more self-government—in the literal sense of the word—by both individuals and the various parts of the private sector. In the case of business, its primary responsibility is above all to ensure the ethical basis of free enterprise. For nothing quite so endangers this great system as the mistrust of business by the American people.

Every case of price fixing, every instance of bribery or kickbacks, every case of fraud, diminishes the stature of business. The threat to free enterprise does not arise from the fuzzy arguments of radical economics theoreticians who would substitute state socialism. Rather, it comes from those few businessmen whose actions degrade their profession and sow suspicion of all business.

I am not sure what the remedies are. But I believe that the leaders of business must realize more fully the critical importance to the nation's future of the conduct of the business community.

American business is far more than a supplier of goods and services. It is more than the segment of the economy that we rely on to solve the difficult problem of energy. It is more than the collective activities that will help lead the development of the world economy.

Greater than all these is business' responsibility to help maintain the moral and ethical standards of the American nation. To the degree that business sets this as its highest goal, we can be confident, I believe, of the survival and advancement of the democratic ideal into the third century of the Republic.

ENERGY COUNCIL SEES SAFE NUCLEAR WASTE DISPOSAL POSSIBLE

The United States should be able to safely handle radioactive wastes resulting from needed expansion of U.S. nuclear power plant capacity, according to the President's Energy Resources Council (ERC), of which Secretary of Commerce Elliot L. Richardson is chairman. The Council's recommendations are contained in a status report on *Management of Commercial Radioactive Nuclear Waste,* which was submitted to the Joint Committee on Atomic Energy. The Council sees the state of technology and the Federal Government's nuclear waste management programs as assuring the safety of nuclear power.

The Council consists of representatives of the Council on Environmental Quality, the U.S. Geological Survey of the Department of the Interior, the Environmental Protection Agency, the Energy Research and Development Administration and the Federal Energy Administration, as well as the Commerce Department. Its main function is coordinating Administration policies and programs relating to energy. The report's principal conclusions are:

- It is scientifically and technologically feasible to manage commercial radioactive wastes in a safe manner.
- The Federal Government has accepted the responsibility for assuring the safe and environmentally sound management of nuclear wastes through a recently-accelerated, comprehensive government waste program.
- Radioactive waste volumes are small compared to other wastes produced in this country. Thus, even substantial costs that could be required for careful disposal of such wastes will not have considerable impact on the cost of nuclear-produced electricity.

Because of the need to reduce dependence on insecure sources of imported oil, and the United States' limited ability to expand oil and gas production, the Council urges a substantial increase in the use of domestic coal and nuclear power. Radioactive wastes are an inevitable by-product of nuclear energy production, and must be carefully processed, handled and isolated from the public until radioactivity decays to harmless levels. In the case of some of these wastes, it will take thousands of years for radioactivity levels to fall to those of naturally occurring materials.

High-level radioactive wastes must be delivered to federal repositories for long-term management, while low-level radioactive wastes may be disposed of by near-surface land burial in designated commercial burial grounds.

The base technology for safe radioactive waste management is documented, the report points out, in a comprehensive study from the Energy Research and Development Administration on *Alternatives for Managing Wastes from Reactors and Post-Fission Operations in the LWR Fuel Cycle.* The ERDA study concludes that reprocessed high-level liquid waste could be solidified into stable solid forms such as glass, as has been demonstrated in pilot plant projects. The solidified wastes can then be encapsulated in containers and safely stored in known stable types of geologic formations such as salt beds, salt domes and granite. This multiple barrier isolation of the wastes would require little subsequent care.

The record of the United States in managing radioactive wastes over the last 30 years includes both favorable experience and instances where problems have occurred. While there have been no discernible health or safety effects on the public from these activities, the experience gained should minimize problems when large-scale operations begin.

To fulfill its responsibility of assuring the safe and environmentally sound management of nuclear wastes, the Federal Government has drawn up a plan for:

—Extensive environmental assessments and impact statements, prior to decisions on reprocessing, recycle, waste forms, storage modes and packaging criteria;

—Selection of specific technologies for waste solidification;

—Selection and qualification of waste terminal storage sites;

—Demonstration and completion of technical development for commercial scale operations;

—Completion of environmental, safety and related regulatory standards, criteria and reviews to assure acceptable radioactive waste management practices; and

—An interagency task force to coordinate these activities among the responsible federal agencies.

The federal agencies represented on the Council are conducting a program to provide nuclear waste terminal storage facilities as they are needed. ERDA is responsible for development of technology and for establishing and managing the waste repositories; the Nuclear Regulatory Commission, for establishing and managing safety and environmental criteria, and for licensing and inspection of storage facilities; the Environmental Protection Agency for establishing general environmental standards for waste disposal; the U.S. Geological Survey for advising on storage sites; and state governments for overseeing low-level waste disposal and storage facilities, by agreement with the Nuclear Regulatory Commission.

U.S. URANIUM SUPPLY CALLED ADEQUATE

This country won't be running out of uranium in the foreseeable future, and perhaps never, a recent government study concludes.

U.S. uranium resources are estimated to be sufficient to supply all existing and planned nuclear power plants, plus any additional reactors which may be placed into service by 1990, over the lifetimes of the plants.

This good news for the nuclear power industry was contained in a report recently released by Secretary of Commerce Elliot L. Richardson, Chairman of the President's Energy Resources Council.

The ERC report, adds, however, that timely expansion of industrial mining and milling of uranium is necessary to avoid any short-term supply problems.

Richardson said the adequacy of the nation's uranium supply is of particular concern to utilities and state regulatory commissions faced with pending decisions as to the type of generating capacity needed to serve the growing demand for electricity.

The report, *Uranium Reserves, Resources, and Production,* cites a recent estimate of the Energy Research and Development Administration, which indicates the existence of a total of 1,840,000 tons of economically recoverable uranium oxide in the form of proven reserves and probable resources.

Noting that this quantity is a prudent resource base for planning nuclear power plant construction programs, the report concludes that it will support at least 300 large nuclear plants over their 30-year lifetimes, a figure exceeding the number of plants expected to be in operation by 1990.

The average 1,000 megawatt nuclear power plant consumes from 4,000 to 6,000 tons of uranium throughout its 30-year lifetime.

The report notes that sufficient uranium resources to supply plants built after 1990 will depend on expanded exploration by industry, and on the development and introduction of nuclear reactors with improved efficiency, such as breeder reactors which generate more fissionable fuel than they consume.

In addition to the proven reserves and probable resources there are an estimated 1,860,000 tons of possible and speculative uranium believed to exist. Substantial additional quantities of lower grade ore exist, but are recoverable only at higher cost.

In order to reduce uncertainty as to the magnitude of the resource base, two of the Energy Resources Council's member agencies—the Department of the In-

terior's U.S. Geological Survey and the Energy Research and Development Administration—are engaged in extensive evaluations of domestic uranium resources. ERDA is also sponsoring a broad research and development program aimed at demonstrating by 1987 the safety, reliability and environmental soundness of breeder reactors.

According to the report, use of commercial breeder reactors would make uranium the country's most abundant energy resource and would expand the ability to utilize present uranium resources by a factor of about 70.

Current estimates indicate that the annual demand for natural uranium will double within the next ten years and will double again during the following decade.

Noting that significant expansion of uranium mining and milling capacity will be necessary to support expanding the U.S. nuclear plant program, the report points out that historically uranium production has been capable of rapid expansion, and adds that recent industry announcements give cause for optimism that expansion of mining and milling capacity will be adequate.

The report was prepared jointly by ERDA, the Council on Environmental Quality, the Department of Commerce, the Department of the Interior, the Environmental Protection Agency, and the Federal Energy Administration.

Weights And Measures Conference To Highlight Metric Conversion

America's impending transition to the metric system will highlight the 61st annual National Conference on Weights and Measures, July 12-16 at the Shoreham-Americana Hotel in Washington.

Metric topics will include training, conversion progress in industry, guidelines for consumer items, terminology and practice of metric units, and government activities.

"Probably at no time in the entire history of the National Conference on Weights and Measures has there been a single issue of greater magnitude and eventual impact," stated Richard L. Thompson, chairman of the 61st Conference. Thompson is chairman of the Weights and Measures Section, Maryland Department of Agriculture.

The Conference brings together weights and measures enforcement officials on the state, county and muincipal levels, along with representatives of business, industry, trade associations and consumer groups. The Conference develops model laws, regulations and handbooks for possible adoption by state and local governments.

In a special observance commemorating the 75th anniversary of the National Bureau of Standards, the Conference will meet July 15 at NBS headquarters in Gaithersburg, Md. John Byington, recently appointed chairman of the Consumer Product Safety Comimssion, will be the featured speaker at the NBS session.

The metric theme for this year's meeting was provided last December when President Ford signed the Metric Conversion Act, which established as national policy the encouragement and coordination of a voluntary changeover to the metric system.

The Act established a 17-member U.S. Metric Board, to be appointed by the President. One of the members will be selected from a list of qualified individuals recommended by the National Conference on Weights and Measures and standards-making organizations.

The Act also instructs the Secretary of Commerce to consult with the National Conference on Weights and Measures to assure that state and local weights and measures officials are "appropriately involved in metric conversion activities" and are assisted in efforts to amend weights and measures laws.

The agenda will include setting a timetable for developing model codes for regulating weighing and measuring devices that are strictly metric. Another item is the issue created by the introduction of automated processes to supermarket inventory and checkout systems.

New Chart Shows World Hot Spots

A Commerce agency is mapping out the hot spots all around the world for businessmen. While this particular map may not improve their social lives, it should be a definite asset in helping them to avoid locating a plant atop a future volcano.

The first of its kind, a map showing the amount of heat flow from the earth's interior, and the locations of active volcanoes and earthquake epicenters, has been issued by Commerce's National Oceanic and Atmospheric Administration (NOAA).

The map is also expected to have wide appeal to scientists and teachers, since it indicates where heat flow measurements have been taken and the approximate heat flow value at each of about 5,500 measurement sites. The map also shows a general correlation between high heat flow and locations where geothermal energy is being produced or is likely to be produced.

The outgrowth of research by scientists of many nations over the last several decades, the map is the product of the World Data Center for Solid Earth Geophysics, operated by the National Geophysical and Solar-Terrestrial Data Center in Boulder, Colo. The center is part of NOAA's Environmental Data Service.

Closely related to heat flow are active volcanoes and earthquake epicenters. The earthquake areas mark lithospheric plate boundaries where two plates interact with each other, such as mid-ocean ridges, fracture zones, trenches, and areas of mountain building. The volcanoes occur for the most part where one plate underthrusts another close to oceanic trenches, such as the Aleutians or South America, where new crust is being formed as at mid-ocean ridges, and some intra-plate islands such as Hawaii.

Copies may be ordered for $2.50 each from the Distribution Division (Code C44), National Ocean Survey, Riverdale, Maryland 20840. Checks should be made payable to NOS--Department of Commerce, and foreign remittance should be made either by international money order or check payable on a U.S. bank.

Business Plans '76 Capital Spending Of $121 Billion

U.S. business plans to spend $121 billion for new plant and equipment during 1976, 7.3 percent more than in 1975, according to a recent survey by Commerce's Bureau of Economic Analysis.

Spending in 1975 was $112.8 billion, 0.3 percent above 1974. The latest 1976 projection compares with $120.1 billion, or a 6.5 percent increase, reported earlier.

Actual outlays in the first quarter of 1976 rose 2.6 percent from the fourth quarter of 1975 to a seasonally adjusted annual rate of $114.7 billion. Plans call for a 5.6-percent rise in the second quarter and smaller rises in the second half of the year: 1.5 percent in the third quarter and 1.1 percent in the fourth.

These data are not adjusted for price changes. If businessmen have reflected the recent 6.5 percent annual rate of price increases in their latest spending projections, very little increase in real investment is indicated by the survey results.

PRODUCTIVE CAPACITY USE AT 18-MONTH HIGH

U.S. manufacturing plants were using more of their capacity during March than they had for the prior 18 months.

The national rate of manufacturing capacity utilization was 82 percent, 3 points higher than December, according to a late April and May survey by Commerce's Bureau of Economic Analysis.

Increases occurred in all major industries, but were larger in durables than in nondurables. The March rate was 7 points above the rates in March and June of 1975, but 4 points below the peak of 86 percent in March and June 1973.

Usage of capacity in motor vehicles rose 11 points, to 98 percent, as automakers stepped up output of large- and intermediate-sized models. Partly reflecting the step-up in motor vehicle production, primary metals rose 9 points, to 78 percent. Other increases in durables included stone, clay, and glass (6 points), electrical machinery (3 points), and nonelectrical machinery (3 points).

In nondurables, the rate of capacity utilization increased 5 points in rubber, to 86 percent; 4 points in paper and textiles, to 89 percent; and 3 points in petroleum, to 94 percent.

Large firms, with assets of $100 million and over, reported a usage rate of 84 percent. Medium- and small-sized firms reported 78 and 76 percent, respectively. Primary-processed goods industries reported a 5-point rise, to 83 percent, and advanced-processed goods a 2-point rise, to 81 percent.

The survey—conducted quarterly—asks manufacturers for actual and preferred rates of capacity utilization for the last month of each quarter. The survey has been conducted annually since 1965 and quarterly since 1968.

Manufacturers' Capacity Utilization Rates

(Seasonally Adjusted)

	Operating rates (percent)							
		1974			1975			1976
Industry and asset size	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.
All manufacturers	84	84	78	75	75	79	79	82
Asset size:								
$100 million and over	87	87	80	77	76	80	80	84
$10 to $99.9 million	83	81	75	73	75	77	76	78
Under $10 million	79	77	72	70	72	73	74	76
Durable goods[1]	84	84	76	74	73	78	77	81
Asset size:								
$100 million and over	85	87	79	77	75	80	78	84
$10 to $99.9 million	83	82	75	72	71	74	73	76
Under $10 million	77	76	68	66	67	70	70	74
Primary metals	90	90	82	79	69	74	69	78
Electrical machinery	85	83	78	73	71	73	75	78
Machinery, except electrical	88	89	87	84	82	84	81	84
Transportation equipment[2]	80	83	71	71	73	81	78	85
Motor vehicles	87	92	70	73	80	93	87	98
Aircraft	69	71	72	68	64	65	64	66
Stone, clay, and glass	81	81	70	68	67	74	72	78
Nondurable goods[3]	85	84	80	76	78	80	81	82
Asset size:								
$100 million and over	88	87	83	77	79	81	83	84
$10 to $99.9 million	82	80	76	75	78	80	79	81
Under $10 million	80	78	75	74	77	76	77	78
Food including beverage	81	79	77	77	79	77	76	77
Textiles	87	80	69	69	76	83	85	89
Paper	93	94	84	74	76	81	85	89
Chemicals	86	86	81	72	72	75	78	80
Petroleum	92	89	90	87	87	91	91	94
Rubber	88	86	77	65	74	78	81	86
Primary-processed goods[4]	87	86	79	75	73	78	78	83
Advanced-processed goods[5]	83	83	77	75	76	79	79	81

1. Also includes producers of lumber, furniture, fabricated metals, instruments, and ordnance and miscellaneous manufactures.
2. Also includes producers of other transportation equipment.
3. Also includes producers of tobacco, apparel, printing and publishing, and leather.
4. Includes producers of lumber; stone, clay, and glass; primary metals; fabricated metals; textiles; paper; chemicals (at ½ weight); petroleum; and rubber.
5. Includes producers of furniture, electrical machinery, machinery except electrical, motor vehicles, aircraft, other transportation equipment, instruments, ordnance and miscellaneous manufactures, food including beverage, tobacco, apparel, printing and publishing, chemicals (at ½ weight), and leather.

Tiny Research Sub Seeks Answer To Sludge Problem

Ocean-dumped sludge, so much in the headlines lately, will be the target of a tiny Commerce-sponsored research submarine in dives later this month.

Between now and August 1 a two-man research submarine will be operating off the northeast coast in studies ranging from the geology of potential offshore oil drilling sites to the ecology of fish.

This General Oceanographics sub is carrying scientists down to 1,000 feet below the ocean surface under contract with Commerce's National Oceanic and Atmospheric Administration (NOAA). The program is conducted in cooperation with the U.S. Geological Survey and the Army Corps of Engineers.

In mid-July, biological studies of ocean dumping sites will be carried out by Gilbert Chase of the Corps of Engineers, stationed at Waltham, Mass. His work involves dives on the Brenton Reef ocean dumping site and the Rhode Island Sound shelf area.

Dr. George Freeland of NOAA's Atlantic Oceanographic and Meteorological Laboratories, Miami, will gather geological and biological information on the seafloor of the New York Bight in dives in late July. This work is part of research in the area in connection with the Marine Ecosystem Analysis program.

Dr. David Folger, of the U.S. Geological Survey at the Northeast Fisheries Center in Woods Hole, Mass., is making geological observations in expected oil-drilling areas of Georges Bank and the Baltimore Canyon.

101 Managerial Situations Delineated In New Book

101 Managerial Situations and How To Handle Them provides information for middle- and upper-level managers on how to obtain greater productivity, improved efficiency and heightened employee cooperation.

The book, by management consultant William Wachs, presents 101 real-life business situations, each followed by a thorough discussion of the problem, a number of alternative ways to approach it and a variety of ideas on how businessmen can prevent similar difficulties from arising in the future.

The 231-page book, priced at $9.95, is available from Parker Publishing Company, Inc., Attn.: Ms. Blossom K. Israel, West Nyack, N.Y. 10994.

NORTHEAST REGION SEEKS COOPERATIVE ANSWERS TO PROBLEMS

Even the rugged individualists of New England and their neighbors in the other Northeastern States have come to appreciate the benefits of cooperative economic endeavor.

Work is in progress to develop a comprehensive program for economic development of the region consisting of Maine, New Hampshire, Vermont, Connecticut, Rhode Island, Massachusetts, New York, New Jersey, Pennsylvania and Delaware.

As a result of a conference held in Albany last fall, a steering committee has been appointed to develop specific objectives for balanced economic growth in the coming year. The steering committee includes a representative from each legislature of all ten states.

The conference, sponsored in part by a grant from Commerce's Economic Development Administration, catalogued the economic troubles of the Northeast as well as its advantages, and the need for coordinated action to develop a well-ordered economic program.

The conference report pulls no punches, saying among other things:

"While other regions of the country are reaping the benefits of demographic trends and the willingness to work together, the Northeastern States are involved in an internecine competition for what appears to be an increasingly smaller portion of our nation's capital resources.

"As representatives of the citizens of the Northeast, state legislators cannot sit idly by and allow bureaucratic inertia to compound the difficulties of our region's already poor economic health.

"Relatively free of the hindrance of ponderous bureaucratic machinery and procedures, the legislatures can and must take the initiative to explore the common ground, develop the alternative responses and stimulate the implementation of innovative means of achieving balanced growth for the Northeast."

The consensus of the Conference was that the Northeast would have to respond to its critical economic problems as a region.

The conference found these advantages and disadvantages of the Northeast in attacking its troubles:

Advantages: The Northeast is adjacent to and part of one of the world's great markets, the U.S. Eastern seaboard; it has a great tradition of excellence in public and private education; it has a reputation for technological innovation; it contains extensive areas of carefully protected open space for public recreation; it has already made considerable investments to improve the quality of its environment; it has an experienced, skilled labor force; and it has a heritage of strong, responsive local government.

Disadvantages: The region's energy costs are high and increasing; the tax loads are burdensome; the labor force is comparatively older; business and industry are moving to the South and West, and productive workers and jobs follow; investment capital for the region is becoming more scarce even as the region's industrial plants are becoming obsolete.

More Firms Sought For Government Procurement

A program to aid business in selling to the Federal Government has been developed by the Department of Commerce and the General Services Administration.

The program went into effect with the signing of a memorandum of understanding between Commerce and the GSA. It involves an effort to increase opportunities for local firms to bid on government contracts and to stimulate business community interest in selected GSA procurements.

The expectation is that new sources of supply for GSA procurement will be located by using Commerce's 43 district offices, 19 satellite offices, and more than 800 associate offices.

The program is designed to benefit both government and business. The new sources of supply are expected to:

- Increase competition and lead to lower prices and a consequent savings of tax dollars;
- Expand the government's procurement base, which could be vitally important in a national emergency, and
- Bring about a more even distribution of the federal procurement dollar among businesses.

In carrying out the program, GSA will supply Commerce with a list of 200 to 250 types of specific items for which GSA believes Commerce assistance will be needed. These items will cover requirements which are repetitive in nature, on which few bids were received in the most recent procurement, and for which the most recent contract exceeded $50,000 in value.

Commerce field offices will attempt to uncover the location of new sources for GSA procurement by including announcements of the program at trade seminars and procurement conferences and in their newsletters. Assistance and encouragement will be given to possible bidders by trade specialists attached to the field offices. The trade specialists also will direct prospective bidders to the nearest GSA Business Service Center for technical assistance.

DEGREE OF DANGER CRUCIAL TO PROPOSED CLOTHING STANDARD

U.S. clothing manufacturers are keeping a close eye on a proposed standard which could seriously affect the materials and design of their products.

A flammability standard for general wearing apparel developed by Commerce's National Bureau of Standards (NBS) designed to help reduce the number and severity of burns resulting from loose, flowing clothing designs is under consideration by the Consumer Product Safety Commission (CPSC).

If the standard is adopted by the CPSC, it would mean that manufacturers of all wearing apparel, from suits and dresses to underwear and hosiery, would have to select their material and designs from criteria set out in the standard.

The thrust of the proposal is to require that fabrics of low flammability be used in garments most likely to be involved in serious injuries, and that correspondingly less rigorous requirements be set for garments less likely to be so involved.

A team of five researchers have developed a new test method for apparel based on the amount of heat transferred from a burning fabric to the wearer's body. This has become known as "the mushroom test" because of the configuration of the test apparatus.

The draft standard would require apparel fabric to be classified according to flammability (as determined by the mushroom test)and garments to be classified according to the area of the body covered and looseness or tightness of the fit.

The concept of classification is based on accident data which shows that loose-fitting, flowing garments are most often involved in fire accidents. The chances of an accident decrease with the tightness of the garment. Therefore, long, loose-fitting garments would require the safest fabric.

The draft standard would require the fabric manufacturer to test all of his material to identify its flammability class. The garment manufacturer would be required to classify his designs according to the type of fit as determined by length and width measurements, and then compare his classification with a tabulated chart listing which class of fabric he would be allowed to use.

The expectation is that it may be three years or more before a final standard would become effective, in view of the need to provide time for industry to comment and then to comply with the standard when it became effective.

DEADLY RIP CURRENTS ARE EASY TO AVOID

Much more dangerous than sharks, though not as dramatic, rip currents claim the lives of far too many Americans each summer.

Rip currents take lives because swimmers caught in them usually panic. Yet, escape from a rip current is easy—if you know what to do.

Commerce's Atlantic Oceanographic and Meteorological Laboratories in Miami, have developed five simple rules every swimmer should know:

(1) Learn to recognize a rip current;

(2) Look for them every time you go to the beach;

(3) Point them out to children and tell them about them;

(4) Avoid them if possible; but

(5) If you do get caught in one, swim parallel to the beach, and you will soon be out of it.

A rip current is a strong, narrow outflow, perpendicular to the shore, and carrying back to sea the water brought in by waves. Part of a generally circular pattern of water movement found off most long, gently-sloping sand beaches, a rip current can travel at speeds up to two or three miles an hour, constantly changing position. The same beach may have several of these currents at one time and then go weeks without any at all.

Once outside the surf zone, the rip current dies rapidly, spreads out, and often forms a large, sluggish eddy which oceanographers call a "rip head".

Rip currents usually are easy to detect once you know what to look for. Generally, the pattern of the sea surface is one of long lines running parallel to the beach. The rip current breaks up this pattern by forming a criss-cross line perpendicular to the beach. Small choppy waves sometimes form a line out to the surf zone, and often a foam line will indicate the location of a rip current.

Occasionally, when there is sediment in the water, a long brownish band of darker water may indicate a rip current.

If a rip current has been in one place for a while, there is often a short sand spit built out from the beach at the base of the rip.

If, while swimming, you notice yourself moving faster in one direction along the shore, you should expect rip currents to be developing. If while walking from the beach into shallow water there is a current pulling at your legs, you may be able to see a spot down-current where a rip is moving water seaward. Or look at the end of a jetty, groin, or other solid obstruction to the longshore movement of water, and there will probably be a rip current where the water is deflected seaward.

Swimmers will know when they are in a rip current. The first indication is that their feet touch bottom occasionally, giving the feeling the bottom is moving fast toward shore. When their feet no longer touch bottom they find they are further out to sea than expected, or moving faster than other swimmers nearby.

This is the point where most swimmers start swimming their hardest toward the shore, making a fatal mistake. Since the current is seldom more than 10 or 20 feet wide, swimmers should swim parallel to the beach, and will very soon be out of it.

An alternative is to relax and let the rip current carry the swimmer seaward through the surf zone into the rip head where it slows down. From there, you can have a leisurely swim back to the beach parallel to the rip current.

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Washington, D.C. 20004

Bulk Shippers' Needs Get National Conference

The problems and potentials of America's bulk cargo shippers will be aired at a National Assessment and Planning Conference on U.S.-Flag Shipping to be held July 12-14 at Hyannis, Mass.

The conference will: seek industry's views concerning the U.S.-flag bulk shipping industry, its problems and its potential; increase the industry's awareness of the various federal assistance programs available to it; and provide American exporters and importers with a better understanding of bulk shipping.

Participants in the conference will include government officials, ship operators and builders, importers and exporters, naval architects and representatives of financial institutions and port interests.

Case studies of actual bulk cargo business situations will be analyzed to develop constructive solutions to the problems hindering further development of the U.S.-flag bulk fleet.

The Maritime Administration, an agency of the Department of Commerce, conducts a variety of programs designed to promote and strengthen the nation's maritime industry, including financial assistance, marketing, and research and development programs to improve the competitiveness of U.S.-flag shipping.

Additional information is available from the Office of Market Development, Maritime Administration, U.S. Department of Commerce, Washington, D.C. 20230 (202-377-3325).

Ten Counties Eligible For Economic Assistance

Ten areas in seven states have become eligible for federal financial assistance to help plan and carry out projects to stimulate economic growth and create jobs.

Commerce's Economic Development Administration has named the following high unemployment counties as redevelopment areas: Alabama: Dale County; Georgia: Hall and Wayne counties; Kentucky: Garrard County; Maine: All of Lincoln County except the Towns of Dresden and Waldoboro; Nebraska: Hayes County; South Carolina: Chester, Florence and York counties, and Tennessee: Lincoln County.

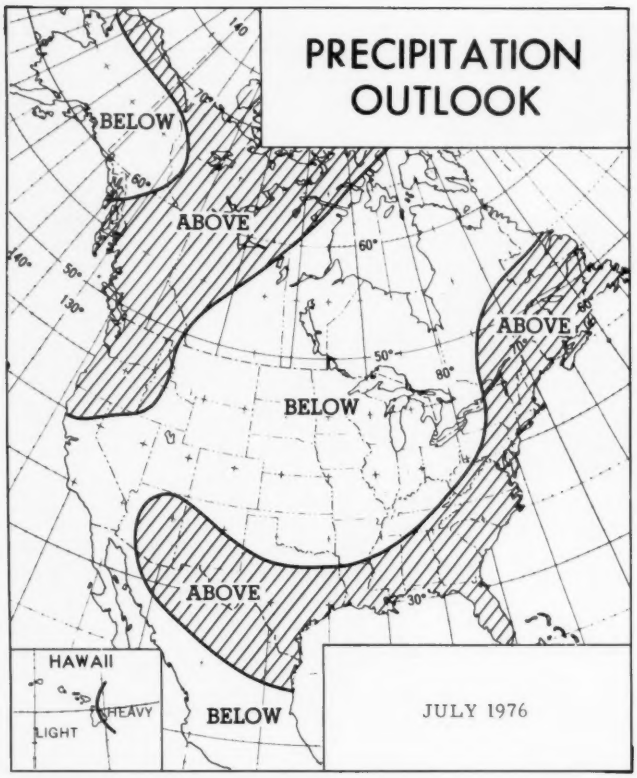
As redevelopment areas, they become eligible to participate in EDA programs to help stimulate economic growth and create new job opportunities. The programs include:

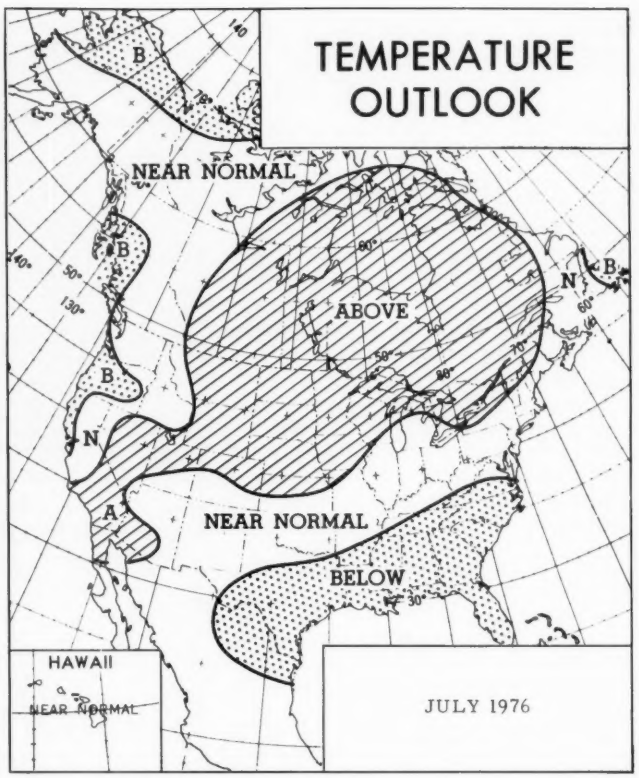
—Grants to help communities construct public facilities which are necessary to attract industry.

—Loans and loan guarantees to private businessmen to expand existing plants or to locate in areas of high unemployment.

—Planning and technical assistance to help develop resources.

In requesting designation, each area prepared an overall economic development program listing resources and job needs. Projects receiving EDA assistance must be consistent with the development program.





WHAT'S IN STORE—*Anticipated temperature and precipitation maps for the coming 30 days are published biweekly by Commerce's National Oceanic and Atmospheric Administration. These give the outlook for the coming month.*

New Device Removes Much Of The Guesswork At Sea

Much of the thrill could be going out of the sea captain's job if a recent innovation proves successful. And the captains will probably be grateful for it. Ship owners certainly will be.

A newly-developed automated sensor minicomputer information display system is expected to give sea captains greater control over their ships, provide better fuel economy, and help safeguard ships and their cargoes.

Called the Hull Monitoring System (HMS), the device was designed under a Maritime Administration contract by the Instruments and Controls Division of Technology Inc., Dayton, Ohio. A prototype is being installed for a year-long evaluation at sea.

The HMS main control console at the captain's station receives signals from sensors located throughout the ship. The minicomputer analyzes this information and reports at frequent intervals the ship's draft, trim, stability, hull stress, cargo lashing, and flooding conditions. The status of each condition is displayed on the console screen as a percentage of its design limit. In addition, the conditions are indicated by colored lights and sound alerts.

The captain can also ask questions about the ship's condition by pushing buttons on his keyboard. Answers appear on the console screen, along with recommendations. Naturally, control of the ship remains with the captain. The HMS is strictly a device to aid in making decisions.

Tax Guide On Buying, Selling A Business Updated

The third, revised edition of Prentice-Hall's *Tax Guide For Buying And Selling A Business* has just been published. The text and citations have all been updated to reflect new court decisions, rulings and regulations, and now incorporate the new Revenue Acts which have been passed since the publication of the second edition.

The volume, revised by Stanley Hagendorf, contains more than 100 major sections to help tax practitioners keep abreast of the vast changes in tax planning and its far-reaching implications. Hundreds of model forms, charts and illustrative examples are included.

Tax Guide For Buying And Selling A Business may be ordered for $24.95 from Prentice-Hall, Inc., Attn.: Ms. Blossom K. Israel, Englewood Cliffs, N.J. 07632.

Study Cites Management Education Needs of Women

A recently-published book from the AMACOM division of American Management Assn. is the first stage of a study of management education needs of women. *Women: A Worldwide View of Their Management Development Needs* contains survey and interview data on the under-utilization of women in management and at decision-making levels.

The study covers all regions of the United States and 30 foreign countries. Most of the respondents, who either owned or operated their own businesses or held middle- or upper-management positions, indicated that training of women for management positions should be done in conjunction with men. They did not feel that women should be segregated and trained separately. The specific management skills listed as most often neglected were in the areas of finance and accounting, planning and effective decision making. Two sections of the report are devoted to recommendations made by the respondents for developing women managers.

The report, priced at $7.50 for members of AMA, $10 for others, is available from AMA, 135 West 50th St., New York 10020.

Impact Of Ice, Volcanoes On Alaskan Petroleum Exploration Studied

Oil companies are awaiting the results of an investigation of the possible effects of ice movement and volcanic activity on petroleum exploration and development off Alaska.

Awards totaling nearly $4.8 million have been made to the University of Alaska for this purpose by Commerce's National Oceanic and Atmospheric Administration (NOAA).

The contracts, which continue work begun in the spring of 1975, are part of a major marine study conducted by NOAA's Environmental Research Laboratories for the Interior Department's Bureau of Land Management as a part of the Outer Continental Shelf Environmental Assessment Program. The studies seek to determine the probable ecological impact of oil exploration and development activities on Alaska's outer continental shelf.

The main purpose of the research, which is being conducted between the spring of 1975 and September 1976, is to determine the amount of stress which moving ice could exert on offshore structures, and the effects of crude oil and other petroleum-associated chemicals on marine organisms.

The researchers will also study the potential hazards of offshore permafrost and volcanic activity on oil exploration operations, and make comprehensive assessments of the marine microorganisms and bottom dwelling fishes in the Gulf of Alaska and the Bering and Beaufort Seas.

To evaluate the fracture strength of moving ice sheets against offshore grounded structures, the scientists will implant a series of pressure gauges on an ice sheet adjacent to a grounded ice floeberg located about 100 miles northwest of Point Barrow, Alaska.

As the ice pack crushes against the floeberg, ice stress buildup and motion will be recorded until the gauge is destroyed. Data from the experiment will be used to place lower limits on the required strength of manmade structures such as offshore oil rigs to be placed in the ice-bound waters.

The research team will study the activity state and potential environmental hazard of two Cook Inlet volcanoes, Redoubt and Augustine. Both could pose a major hazard to oil development in the Gulf of Alaska area.

The project also involves adding 11 short-period seismic stations to an existing network to lower the detection threshold of earthquakes to Richter magnitudes of two or three. Six stations will be installed on Kodiak Island, two in the lower Cook Inlet, and three in the Katmia-Alaska Peninsula area.

Results from the expanded seismic network will be combined with hypocenter maps produced by NOAA's Environmental Data Service. The researchers will also monitor the micro-earthquake activity of the two volcanoes and determine the type of fracturing along the region's active faults.

The University's work also involves the development of methods of estimating the possible impact petroleum-related offshore activities could have on marine organisims.

Calendar Of Business Events

July 8—Wichita, Kan.—Business Opportunity/Federal Procurement Conference, Century II Exhibition Hall. Sponsors: Sen. James B. Pearson, Sen. Bob Dole, Rep. Garner E. Shriver. For information: Nancy Schmitt, c/o Sen. Dole, 100 N. Broadway, Wichita, Kan. 67202 (316-263-4956); or Tom Blossom, c/o Rep. Shriver, Box 1974, Wichita. Kan. 67201 (316-265-4233).

July 11-14—Washington — Washington Gift Show, Shoreham Americana and Sheraton Park Hotels. For information, Irene Weissman, Little Brothers Shows, Inc., 261 Madison Ave., New York 10016 (212-986-8000).

July 11-16—Dallas—July Homefurnishings Market, Dallas Market Ctr. For information, Public Relations Dept., Dallas Market Ctr., 2100 Stemmons Freeway, Dallas 75207 (214-748-6832).

July 12-16—Washington—National Conference of Weights & Measures, Shoreham Americana Hotel. For information, Harold Wollin, Exec. Sec., Nat'l Conference of Weights & Measures, National Bureau of Standards, Washington, D.C. 20234. (301-921-2401).

July 13-15 — Washington — Improving Managerial Skills, Georgetown Univ. For information, Continuing Mgt. Education, SSCE, G'town U., Washington, D.C. 20057 (202-625-4353).

July 15—State College, Pa. — Business Opportunity / Federal Procurement Conference, Penn State University. Sponsor: Rep. Albert W. Johnson. For information, Sally Woodring, c/o Rep. Johnson, 44 E. College Ave., Suite 360, State College, Pa. 16801. (814-234-7930).

July 15—Kansas City—Women in Business conference, Kansas City Trade Mart. Sponsors: Small Business Administration and other government and local agencies. For information, Kansas City SBA (816-374-7212).

July 15-16—Albuquerque—Techniques of *In Situ* Energy Recovery short course, Univ. of New Mexico. For information, Doyle Caton, Mgr., Energy Information, Technology Application Center, U. of N.M., Albuquerque, N.M. 87131.

July 18-20—Ipswich, Mass. — Prospects for New Printing Systems, Institute for Graphic Communication Conference Ctr. For information, IGC, 375 Commonwealth Ave., Boston, Moss. 02115 (617-267-9425).

July 18-23—Los Angeles—Fourth Annual Intersociety Conference and Exposition on Transportation, Los Angeles Hilton Hotel. For information, Thomas P. Woll, Federal Railroad Administration, U.S. Dept. of Transportation, 2100 2nd St. SW., Rm. 4108, Washington, D.C. 20590.

July 19-20—St. Louis—A Professional Approach to Marketing Construction Services seminar, Stouffer's Riverfront Towers. For information, Madeline Graeter, Group Communications, Inc., 6101 Southwest Freeway, Suite 401, Houston, Tex. 77057 (713-664-8818).

July 19-21—New York—Fundamentals of Finance & Accounting for the Non-Financial Executive, Barbizon-Plaza Hotel. Sponsor: The Wharton School, Univ. of Pa. For information, Heidi Kaplan, New York Mgt. Center, 360 Lexington Ave., New York 10017 (212-953-7262).

July 19-Aug. 5—Chicago—Prevention of Explosions, Fires and Injuries in the Gas and Petroleum Industries, Ill. Institute of Technology and training school in Marinette, Wisc. For information, Kathy Fisher, Fire Protection Course, Institute of Gas Technology, 3424 S. State St., Chicago, Ill. 60616 312-567-3881).

July 21-22—St. Louis — Design/Build, Build/Lease and Financing Building Projects seminar, Stouffer's Riverfront Towers. For information, Group Commuunications, Inc., see address above.

July 23—Duluth, Minn.—Business Opportunity/Federal Procurement Conference, Arena-Auditorium. Sponsor, Rep. James L. Oberstar. For information, Mr. Jody Kauchick, c/o Rep. Oberstar, 231 Federal Bldg., Duluth, Minn. 55802 (218-727-7474).

July 26-28—Washington—Program Budgeting, Georgetown Univ. For information, see address above.

'Economic Summit' Has Anti-Inflation Emphasis

PRESIDENT FORD IS HOST TO HEADS OF STATE; RESTRAINT SEEN VITAL IN TRANSITION PERIOD

Seven major industrialized nations, seeking to move the international economy out of the current period of recovery into a sustainable period of expansion, are emphasizing the need to avoid inflation.

This direction was set at the "economic summit" meeting in Puerto Rico June 27-28 at which President Ford played host to the heads of state of Canada, France, West Germany, Italy, Japan and the United Kingdom.

"Our objective now," the leaders agreed, "is to manage effectively a transition to expansion which will be sustainable, which will reduce the high level of unemployment which persists in many countries and will not jeopardize our common aim of avoiding a new wave of inflation.

"That will call for an increase in productive investment and for partnership among all groups within our societies. This will involve acceptance, in accordance with our individual needs and circumstances, of a restoration of better balance in public finance, as well as of disciplined measures in the fiscal area and in the field of monetary policy and in some cases supplementary policies, including incomes policy. The formulation of such policies, in the context of growing interdependence, is not possible without taking into account the course of economic activity in other countries."

Rebound bringing confidence

The seven leaders spoke of recent economic progress, saying in their closing joint declaration that "renewed confidence in the future has replaced doubts," and pointing out that success in fighting inflation and overcoming unemployment in some countries has had a beneficial effect on other countries where recovery is still relatively weak.

In a passage that many observers interpreted as referring to Italy, the declaration noted: "We recognize that problems may arise for a few developed countries which have special needs, which have not yet restored domestic economic stability, and which face major payments deficits. We agree to continue to cooperate with others in the appropriate bodies on further analysis of these problems with a view to their resolution. If assistance is necessary to avoid general disruptions in economic growth, then it can best be provided by multilateral means coupled with a firm program for restoring underlying equilibrium."

The summit participants commented in their closing statement on a number of current developments on the worldwide economic scene.

- Reform of the international monetary system. Early legislative ratification of agreements made by the International Monetary Fund at a recent Jamaica meeting was urged. Participants also stressed "the importance of each nation managing its economy and its international monetary affairs so as to correct or avoid persistent or structural international payments imbalances."
- Lowering of trade barriers. "At the OECD we reaffirmed our pledge to avoid the imposition of new trade barriers.... Wherever departures occur, elimination of the restrictions involved is essential and urgent." Also, it was held to be important to avoid exchange rate policies that distort world trade and give rise to protectionist responses.
- Progress in the Geneva Multilateral Trade Negotiations. The goal of completing these negotiations by the end of 1977 was reaffirmed .
- East-West economic relations. It was agreed that developing such relations on a sound financial and reciprocal commercial basis "warrants our careful examination, as well as efforts on our part to ensure that these economic ties enhance overall East-West relationships."
- Government-supported export credits. "We welcome the adoption, by the participating countries, of converging guidelines with regard to export credits. We hope that these guidelines will be adopted as soon as possible by as many countries as possible." (Action by the Eximbank of the United States in this field was reported in the June 21 issue of *Commerce America*).
- International investment climate. The participants commended the OECD Ministerial Council declaration on this subject (see item in "Multilateral Trade Negotiations" section on next page).
- Energy. "We intend to make efforts to develop, conserve and use rationally the various energy resources and to assist the energy development objectives of the developing countries."
- Relations with developing nations. "The industrialized democracies can be most successful in helping the developing countries meet their aspirations by agreeing on, and cooperating to implement, sound solutions to their problems which enhance the efficient operation of the international economy." The participants said their efforts "must be mutually supportive, not competitive" and "considered as complementary to the policies of the developing countries themselves."

The leaders commented also, on relations with the developing nations, that some progress has been made in following up the results of the 1975 Seventh Special Session of the UN General Assembly, including "the positive results achieved in some areas at the UNCTAD IV meeting in Nairobi" and the work being carried out by the Conference on International Economic Cooperation in Paris.

The declaration concluded on this note: "We attach the greatest importance to the dialogue between developed and developing nations in the expectation that it will achieve concrete results in areas of mutual interest. And we reaffirm our countries' determination to participate in this process in the competent bodies, with a political will to succeed, looking toward negotiations, in appropriate cases. Our comon goal is to find practical solutions which contribute to an equitable and productive relationship among all peoples."

The Puerto Rico meeting was the second in a series of economic summits. The first was held in Rambouillet, France, last November.

Multilateral Trade Negotiations

This article is another in a series of progress reports on the multilateral trade negotiations, prepared by the Commerce Department Office of Int'l Trade Policy.

WASHINGTON

Industry Policy Advisory Committee (IPAC) members were briefed and consulted June 16 on the MTN issues of GATT reform, sectors, government purchasing, safeguards, customs matters, and tariffs. A highlight of the meeting was an MTN status report by Ambassador Walker, head of the U.S. MTN Delegation. Next meeting: Nov. 10.

The sixth round of **Industry Sector Advisory Committee** (ISACs) meeting was held June 2-14. The 27 committees were divided into four groups, with each group meeting in a plenary session followed by individual committee meetings. During plenary sessions the members were briefed on quantitative restrictions, GATT reform, and government purchasing. In the individual committee meetings the ISACs were further consulted on these issues, as well as on border taxes, safeguards, tariffs, and sectors. The committees also continued work on the fine-tuning of their advisory reports. The next full round of ISAC meetings is scheduled for Sept. 20-30. Meetings of individual ISACs may be called prior to that time upon request, however.

A combined meeting of the **Labor Sector Advisory Committees** (LSACs) and the **Labor Policy Advisory Committee** was held on June 15, with Ambassadors Dent and Walker in attendance. The advisory reports of the LSACs are nearing completion, with the Transportation and Electrical sectors completed and three other sector reports in the final stages. The Services sector still has some remaining issues to be resolved before a report can be drafted.

The **Agriculture Policy Advisory Committee** met June 17 with Ambassadors Dent and Walker and Secretary Butz to discuss various MTN issues. Ambassador Walker gave a report on the progress of negotiations from his Geneva perspective. Specific issues which were discussed were safeguards, variable levies and sectors.

The **President's Advisory Committee on Trade Negotiations** (ACTN) will meet at the Department of Agriculture Sept. 9. Secretary of Agriculture Earl Butz and his international trade advisors will discuss agricultural issues in the Multilateral Trade Negotiations. The ACTN meetings are being rotated among the Commerce, Agriculture, and Labor Departments in order to assure full exposure of the ACTN to the issues of concern to the constituencies of those departments, as well as to the private sector in general.

GENEVA

The MTN Agriculture Group's **Grains Subgroup** held its fifth session May 24-26 and continued the multilateral examination and analysis of measures affecting grain exports and imports applied by individual countries. It was noted that little progress had yet been made in narrowing the differences of view between some of the major trading countries. However, in order to advance the Subgroup's work more rapidly, it was agreed that bilateral and plurilateral discussions among participants should be intensified.

Issues of particular concern to the U.S. were discussed at the June 14 **GATT Council** meeting. American imposition of import controls on specialty steels was generally criticized as unwarranted by the Council members. Although no formal charges were leveled at the U.S., a number of participants, including the EEC and Canada, reserved their rights under Article IX to take future action. The U.S. noted it would probably submit a formal Article XIX notification on the specialty steels action.

The U.S. requested the establishment of a GATT panel under Article XXIII:2 to examine the EEC minimum import price and licensing system on processed fruits and vegetables. The EEC objected to the immediate establishment of such a panel but agreed to respond to the U.S. request without "undue delay." Although the U.S. had support from Australia and Canada, there was insufficient support to establish the panel at this meeting. The U.S. request for the panel remains on the agenda for the next council meeting.

The U.S. and Australia asked the EEC to provide interim reports on EEC Association Agreements which were sufficiently thorough and informative to enable third parties to form judgments as to whether, and to what extent, their interests are affected. The EEC responded that these reports were merely "information" reports but would consult with the U.S. and Australia to determine what type of information was sought.

In response to severe balance-of-payments problems the Italian government recently instituted a temporary prior deposit requirement affecting all requests for foreign exchange. The measure is scheduled to expire after three months.

The U.S. expressed sympathy for Italy's financial plight and suggested that Italy submit the measure for review in the Balance-of-Payments Committee. A number of council members supported the U.S. initiative. Italy expressed its willingness to follow the Council's suggestion but preferred that the matter be taken up when discussion resumes at the next Council meeting. It was so agreed.

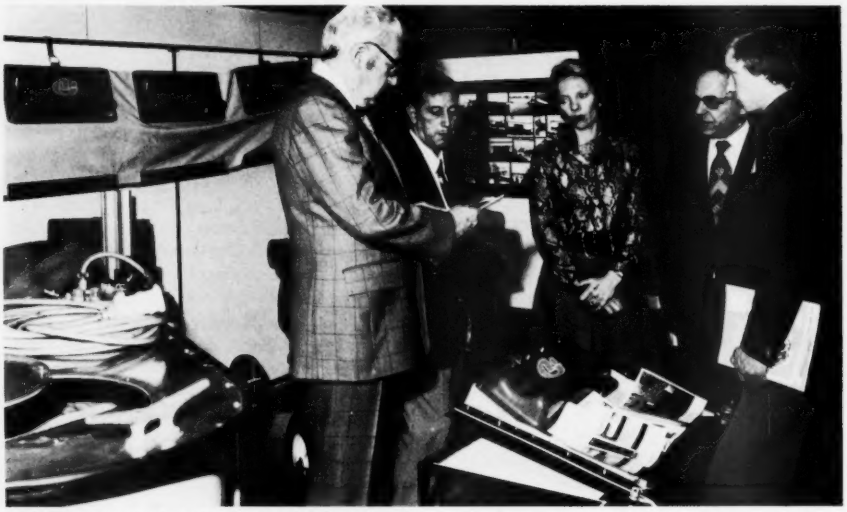
PARIS

At the annual meeting of the **OECD Council** at the ministerial level June 21-22, the governments of the industrialized countries adopted voluntary guidelines for multinational enterprises and international investment, renewed for a further year the OECD Trade Pledge and agreed on the main elements of a strategy for "moderate but sustained" growth.

Secretary of State Kissinger and Secretary of the Treasury Simon led the U.S. Delegation. Secretary Kissinger stressed the need for new cohesion and cooperative economic action by the industrialized countries in addressing the meeting. He urged the OECD countries to adopt a systematic work program to develop objectives and approaches for economic relations with Communist countries. Secretary Kissinger also emphasized the need for the industrialized countries to coordinate their positions on "North-South" issues at international conferences and to increase the effectiveness of their aid efforts to the developing countries. Specifically, he proposed that the OECD members review the entire range of industrialized-developing country issues, develop a set of objectives and strategies for dealing with them, and strengthen the OECD institutional arrangements for handling them.

Secretary Simon stressed that reduction of inflation through the implementation of prudent economic and financial policies is the way to achieve sustainable growth. The final communique laid similar emphasis on the importance of eradicating inflation as a prerequisite for the steady economic growth needed to restore full employment .

The OECD governments, except for Portugal, renewed for a further year the trade pledge, which is aimed at deterring countries from taking unilateral measures to restrict trade and other current account transactions in order to overcome balance of payments problems. The OECD governments, except Turkey, also agreed to a declaration with voluntary guidelines on the activities of multinational firms and related government responsibilities toward international investment: 1) establishing inter-governmental consultation procedures on matters relating to the guidelines; 2) providing for procedures to review laws, regulations and administrative practices which depart from national treatment; and 3) setting up consultation procedures when an OECD member country considers its interests adversely affected by another country's measures providing incentives or disincentives for international direct investment.



POLLUTION CONTROL SHOW—*Theodore Barrie (left) and Joseph Paganotti of Cascade Industries explain (interpreter, center) firm's products to two visitors.*

CONCERN OVER POLLUTION IN FRANCE SPURS INTEREST IN U.S. EQUIPMENT SHOW

An exhibition of pollution-control equipment at the U.S. Trade Center in Paris this spring coincided with a renewed press interest in environmental pollution. In addition, an oil-spill off the coast of Brittany dramatized the pollution threat. Thus, the exhibition evoked strong interest from potential buyers and agents.

The products displayed—oil-spill clean-up equipment, air and water pollution control equipment and instrumentation—demonstrated the advanced technology of American manufacturers and offered visual proof of possible solutions to the problems being revealed in the newspapers and on television.

The French market for pollution control equipment is still in the developing stage, but government actions and public pressure are expected to stimulate demand. Although emphasis has been on control of water pollution, current programs should result in increased attention to solid waste, noise, and air problems, the more stringent monitoring of auto emissions and enforcement of compliance regulations. As U.S. technology is considered to be three to five years ahead of that of French and EEC manufacturers — which have not yet developed versatile, multi-purpose equipment — interest in U.S. equipment should increase in the near term. Best sales potential is likely to be in sophisticated water treatment instruments and equipment, sewage equipment, and oil protection and cleaning equipment.

Several exhibitors commented that few questions were raised concerning prices—indicating that prices may not be a major factor in the acceptance of such products on the French market. Terms of payment, on the other hand, are most important. U.S. exporters would do well to consider granting 90-day letters of credit or time drafts.

Of the 34 exhibitors at the show, 15 were unrepresented in France and their equipment generally unknown. By show's end, 39 agent/distributor agreements, including a number for surrounding countries, were under negotiation; two had been concluded. Though floor sales were only $21,000, 12-month projections are for $6.9 million.

Pollution Control Exhibition Set For Paris In December

An international environmental exhibition and a conference sponsored by the nine Environmental Ministers of the European Economic Community will be held in Paris in December as part of International Environment Week. The commercial display, to be held at Porte de Versailles, Paris, Dec. 7-11, will offer U.S. firms an opportunity to spotlight American products for European and other foreign buyers.

Contact: TECHNOEXPO, 8, rue de la Michodiere, 75002 Paris, to participate in the air, water, and noise sections, and GERP, 12 rue Chabanais, 75002 Paris, for the waste section; and/or the U.S. representative, French Trade Shows, French Chamber of Commerce in the United States, 1350 Avenue of the Americas, New York 10019.

SOPHISTICATED PROCESS CONTROL INSTRUMENTS SELL WELL IN U.K.

A strong, persistent demand for American technology in Britain's processing industries, despite the decreasing buying power of sterling and the general shakiness of the economy, was evident to exhibitors at a recent London U.S. Trade Center show. At PCI '76, 28 exhibitors representing 50 U.S. firms displayed a variety of process control instruments.

In a highly industrialized environment like Britain, competition forces firms to adopt new technology as it becomes available, even if general industrial activity is low. Moreover, although recent aggregate investment figures have been unimpressive, several processing industries, particularly those linked with North Sea oil development, have continued with their growth plans. As the product content of PCI '76 was concentrated in the most sophisticated sectors of the industry, such as microprocessing and data acquisition, the exhibition had great appeal to senior technical personnel from Britain's largest and most advanced corporations. On the other hand, simplified products which offer substantial savings have a strong timely appeal under current economic conditions.

Many of the products that were on display are readily duplicated from domestic and foreign sources. Therefore, they are highly price-elastic, and the current strengthening of the dollar against the pound sterling and other European currencies will adversely affect standard-technology products. For unique high-technology computer-related equipment, buyers are prepared to pay premium prices.

Products considered to have the best sales potential are: micro-computer-based systems, transmitters, controllers, recorders, sequential recording systems, specialized flowmeters, data loggers, digital indicators, small-diameter steel tubing, specialized gages and valves, fire detection and alarm systems, and specialized measuring equipment and analyzers.

"Overwhelming," was the brief evaluation of exhibitor J. W. Liston, sales engineer of DATACAP Inc.; he sold $150,000 worth during the show and found three agents, in addition to expecting $1.9 million in business during the next year. Brian Stones, U.K. representative for Hersey Products, Inc., reported 80 new contacts for his firm, which sold $40,000 off the floor and projects $200,000 within 12 months. Overall, PCI '76 generated $717,000 in immediate sales, and an estimate of about $20.8 million in business over the next year.

FROM PONY EXPRESS TO MICROWAVE—*Visitors at Telecom '76 were startled as Mike Dorsey, Australian TV star, rode into Sydney U.S. Trade Center to deliver a bicentennial message from Commerce Secretary Elliot Richardson by the fastest method available 200 years ago. Dorsey quickly found himself surrounded by the most advanced telecommunications equipment of the 20th century. Photo at right: E. S. Chatlos (left), Chatlos Systems Inc., describes his firm's automatic pressure monitoring systems to a potential customer.*

EXHIBITORS AT 'TELECOM' IN AUSTRALIA GET GOOD SIGNALS FROM END-USERS

Recent advances in technology and rapid growth in demand for telecommunications services in Australia point toward significant marketing opportunities for U.S. firms.

Exhibitors at TELECOM '76, a communications equipment show at the Sydney U.S. Trade Center, agreed that their contacts with the "right" people proved to them that business prospects are excellent. Off-the-floor sales reached $281,500; 12-month projections, almost $11 million. Thirty-six companies participated.

The market for communications equipment in Australia is largely dependent on the capital expenditure plans and policies of the Australian Telecommunications Commission (ATC). This commission, and the Overseas Telecommunications Commission, plan to improve Australia's facilities to match the demand for services.

Several end-user developments, exhibitors noted, may affect the competitiveness or marketability of U.S. products:

- An increased end-user market is predicted for data communications equipment, making possible more efficient, cost-effective use of telephone line facilities—particularly if ATC increases charges for long-haul circuits.
- Greater use of integrated circuits will mean a growing market for printed circuit board (PCB) repair equipment and component testers.
- The greater complexity of PCBs requires computer design accuracy and thus, a larger market for computer-aided design and drafting systems.
- Transportation and fuel costs, together with great distances in Australia, should make video transmission systems more attractive and viable.
- Introduction of FM broadcasting has opened a whole new market for FM broadcast equipment.

Standard procedure in the public sector is to call for tenders; in the private sector, a tendency toward leasing equipment from suppliers is growing, and direct purchases from abroad are rare. U.S. exporters not currently in the Australian market will have to gain approval from the ATC before they can supply equipment which interfaces with the telephone network. Approval from the Postmaster General's Department (PMG) is also required for marketing mobile radio equipment. Certain tolerances and specifications must be met; there are, however, no levies on imports of communications equipment that are not applied to domestically manufactured products.

Australia's geography requires sophisticated data communications equipment, long-haul data transmission over telephone lines and higher technology products for the telephone industry. As labor costs increase, automatic systems will become more attractive.

The current level of Australian technology equals that of U.S. products in some categories, such as radios and transceivers. The size of the market—relatively small—precludes the economic development and marketing of Australian designed/manufactured equipment of a more complex or specialized nature; but U.S. firms should be aware that Australian technical competence is adequate for any level of support, including whole or partial manufacture under license where appropriate.

The continued strengthening of the U.S. dollar, higher rates of inflation in Australia, Japan, and the United Kingdom relative to that in the United States, and increasing Australian labor costs are seen as the most significant factors for the continued price competitiveness of U.S. products. In the short term, little competition is predicted from the domestic industry; third-country suppliers, particularly Canada, Japan and Europe, are the chief competitors.

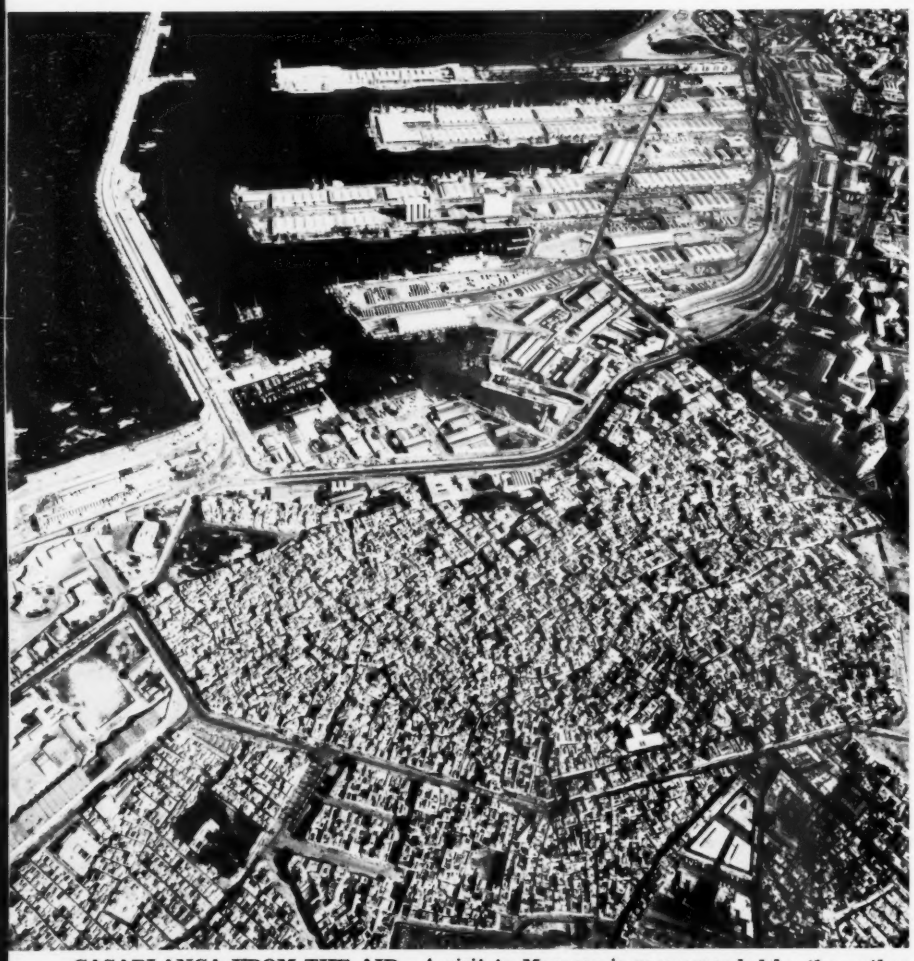
Any increase in the government budget, enabling agencies to purchase higher quality products, should also increase the price competitiveness of U.S. products. At present, however, government departments place major importance on price. As long as restrictions on spending exist, U.S. firms will face difficulty marketing products which are higher priced than those of competitors, despite any quality advantages.

CONSERVATIVE MOROCCO POLICIES ARE BRINGING SOUND ECONOMIC GROWTH

The Government of Morocco has done well in managing the country's industrial development during the last eight years. Despite a few sporadic disruptions attributable to economic and political factors, both domestic and international, the government has brought about consistent growth in the country's GNP. Unlike the precipitous rises and sharp declines of economic expansion often experienced by developing countries, Morocco's growth in GNP has been one of undramatic but steady progression. Actually, budget expenditures for development and the moderate growth rates are a reflection of the government's conservative fiscal policy, according to Joseph L. Fisher, Commercial Attache at the U.S. Consulate General in Casablanca.

Morocco's consistent but undramatic industrial expansion has attracted the attention of relatively few American business persons. Many more would do well to consider the country's past economic achievements and thoroughly investigate the many investment and marketing opportunities in the offing, Fisher adds.

Morocco implemented its first five-year plan in 1968 with the objective of increasing annual average GNP by 4.3 percent; it achieved a rate of just below 6 percent. During the course of the plan investment expenditures amounted to $4 billion, of which most was governmental. During the five years of the plan, mining, fuel and power increased by 32 percent, manufacturing 14 percent, wholesale and retail trade 11 percent and transportation, banking and services, 7 percent. There was no expansion in the construction and public works sector, and agriculture and fishing declined by 23 percent. Upon conclusion of the plan per capita GNP was $286.



CASABLANCA FROM THE AIR—*A visit to Morocco is recommended by the author of this report, to enable a firsthand analysis of the expanding opportunities there.*

The current five-year plan (1973-1977) originally envisaged total investment of $6.6 billion, intended to produce an average real growth rate of 7.5 percent per annum. Of this amount, again, the largest input was to be provided by government and public corporations. Last year, however, the government revised its investment expenditures upward to $5.9 billion, primarily due to a shortfall in private capital investments. A further upward revision is reflected in the government's budgeted $2.5 billion for investment expenditures in 1976. If these expenditures are made, an aggregate $5.2 billion will have been expended during the first four years of the plan.

During 1973 to 1975 the average annual increase in GNP was 5.3 percent as compared to the 7.5 percent increase envisioned in the plan. The shortfall was due to an unexpected and substantial decline in mining output of 25 percent, almost entirely in the crucial sector of phosphates, where sales, in tonnage and value, were considerably lower in 1974 and 1975 than expected. Excepting agriculture and fishing, which declined by 8 percent, all other economic sectors registered increases: construction and public works, 58 percent; manufacturing, 9 percent; fuel and power, 9 percent; transportation, banking and services, 5 percent; and wholesale and retail trade, 5 percent. For 1975, per capita GNP was $430.

The government's 1976 budget shows a deficit of approximately $2.2 billion, and most certainly there will be a trade deficit in 1976 perhaps as great as 1975's $1 billion. However, the government expects to finance these deficits with internal borrowing. The government has just signed a Euro-dollar loan agreement for $300 million, and a $130 million loan is awaiting ratification by the EEC Council of Ministers. Undoubtedly, additional loans and credits will be forthcoming from the Kuwait Fund for Arab Economic Development, World Bank, AID, and other lending institutions. A positive factor in Morocco's ability to obtain financing and loans are its ratios of debt service to exports (9 percent) and to total debts (8.75 percent).

Market nears $3 billion

In 1974 Morocco became a $2 billion import market, an impressive expansion of $1.1 billion in a two-year period, even considering the rising cost of raw materials, machinery and equipment. Total imports in 1975, at $2.7 billion, were up 38 percent. Of this amount, however, capital investment equipment, as opposed to semi-finished products and raw materials, registered the highest dollar and incremental percentage increases in procurement expenditures. Much of this equipment is tied to the 58 percent expansion of the construction and public

works sector previously mentioned; this obviously offers considerable export opportunities for U.S. manufacturers.

Within the next several months the government will announce tenders for machinery in connection with the construction of a million-ton iron and steel mill, a 45,000-ton pulp and paper plant, and equipment for a 25 million-ton phosphate port. Also, there will be a tender for the $200 million expansion program of the Ports of Casablanca and Mohammedia, which will include the procurement of numerous cranes, side-loaders, fork-lifts and container lifters.

Machinery will be required for lead and copper foundries having annual capacities of 70,000 and 30,000 tons, respectively, and a 35,000-ton sodium carbonate plant. Earthmoving, hydroelectric and irrigation equipment also will be purchased for construction of four dams which will commence this year as part of a 15-year program to irrigate one million hectares (2.5 million acres).

Other requirements for the government include refrigerated storage and transportation equipment for perishable food items, food processing and packaging machinery, 40 fishing trawlers, textile machinery and machinery to process sugar cane and beet.

Most involve consulting contracts

Most of these projects will involve contracts for consulting engineers. A couple of American consultants have been among those awarded contracts; they are involved in construction of textile mills and the $160 million expansion of Morocco's principal oil refinery. Also, a number of American companies presently are being considered for a contract to prepare the industrial sector of the government's third five-year development plan.

Given the government's often-mentioned preference for American technology, U.S. consultants should investigate the opportunities open to them in Morocco. Their presence, in turn, would enhance the prospects of additional U.S. exports.

There has been increasing disposition on the part of U.S. firms to consider joint venture investments. Several such proposals are under consideration, including the manufacture of pharmaceuticals, polymerized vinyl acetate, auto batteries and the assembly of trucks and utility vehicles.

Banque Nationale pour le Developpement Economique and the Office de Developpement Industriel are interested in having American companies enter into joint ventures to process and can tomatoes, onions and carrots, in addition to the establishment of a sugar refinery and cement plant.

Morocco's Foreign Investment Code offers numerous incentives to foreign investors. Some of these are exoneration from customs duties, a profit tax holiday of 10 years, and partial refund of interest on loans obtained locally. In comparison to other countries' nationalization laws, Morocco's is quite liberal. While most business enterprises do require 50 percent Moroccan ownership, there are some sectors in which the enterprise can be wholly-owned by the foreign investor. There is, in fact, a substantial private sector in Morocco, which benefits considerably from the effects of heavy public investment.

As for doing business in Morocco, the following excerpt from a recent survey of American companies in the country adequately describes the business climate: "1975 was a very good year for most of the 47 companies in Morocco in which Americans hold substantial equity and managerial interests. It was a year of record sales and profits for some and almost all companies expect an even better year in 1976. With this outlook and with the transition to Moroccanization behind them, managers generally express more satisfaction with their situation and more optimism about the future than was the case a year or so ago. Capital investment plans through 1978 amount to over $11 million, almost all to be financed through earnings and local borrowings."

Hopefully, Fisher concludes, the foregoing should answer the question: Why Morocco? On both counts, exports and investments, one should visit the country to assess the prospects of entering this expanding market.

Kuwait's Aid, Investment Activity Make It Major World Economic Force

The economy of Kuwait is booming, and in a world where serious problems of inflation and recession plague developed economies there is intense competition among international companies to take advantage of that boom. Moreover, the highly developed Kuwaiti entrepreneurial sense together with a great need for management, marketing and technological skills has led local officials and businessmen to urge others to come to Kuwait to talk about the whole range of economic developments that are part of the Kuwaiti boom.

Behind Kuwait's boom, of course, lies tremendous income from oil, continues the U.S. embassy there. Since 1974 annual government income from oil and from investment, which is also becoming significant, has been on the order of $8 billion. Something close to this rate of income is expected to be maintained over the next five years. This is so despite the fact that Kuwait oil production is presently about 2 million bpd compared to over 3 million bpd prior to October 1973. Recent oil price increases as well as constantly increasing investment income have more than compensated for reductions in crude oil production.

There is presently a debate within Kuwait regarding oil production, with important elements of the country's leadership arguing that production should be increased or that it should be reduced even below present levels. As of now, it appears most likely that oil production will remain at or near (i.e., within 250,000 bpd) present levels. Even if oil production and oil income should be reduced somewhat, investment income, which could approach $2.5 billion per year by the early 1980s, will continue to grow.

This level of income, together with recently acquired control of oil production and marketing, in effect, allows the Government of Kuwait to undertake a broad range of ambitious domestic and foreign economic programs. Work has begun and over the next five years several billion dollars will be spent in Kuwait on infrastructure and industrial projects while additional billions will be spent outside Kuwait as investments and aid.

Where the money is going

More specifically, it appears likely that over the next five years income will be in the $40-50 billion range. Of this, between $15 and $20 billion will be consumed by regular budgetary expenditures, some of which will be applied to development projects. Another $10 billion is expected to be allocated to major petroleum-based industrial and shipping, military, public housing and other industrial and infrastructure activities. As much as $10 billion could be set aside for economic assistance programs (if the 1974/75 rate is maintained). There still is likely to be some billions of dollars of investible surplus funds to add to Kuwait-owned foreign assets, which were worth about $14 billion at the end of 1975.

Kuwait is highly developed by regional standards, and yet several major public works programs are being planned or implemented. The most important is a major new program to develop as much as $4 billion in new public housing, including units for both low and medium-income Kuwaitis. American advisors will play an important role as this program is implemented. Several hundred million dollars will be spent to expand Kuwait's power and water desalting facilities. By 1980 the government hopes to double electrical generating capacity to produce 2,618 megawatts of electricity and 92

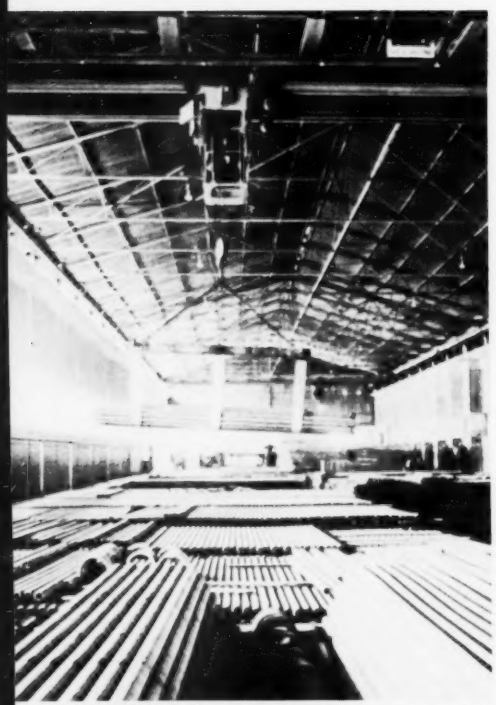
million imperial gallons of sweet water per day. Moreover, the government is beginning to investigate the possibilities of developing nuclear power in Kuwait.

Other major public works and infrastructure programs include a major expansion of Kuwait University, including new medical and engineering schools, continued expansion and improvement of the public school system, and construction of at least five new civilian hospitals with some 2,000 beds.

In addition, several hundred million dollars will be spent to improve and expand transport facilities. These projects include major new port/port expansion programs, projects at Kuwait International Airport, major highway programs and a possible rapid transit link between Kuwait and the main industrial area of the country 30 miles south of the capital.

Kuwait's wealth will also allow "quality of life" improvements such as a $200 million sports/recreation/entertainment complex and telecommunications equipment that will allow direct dialing to foreign countries including the United States.

In addition, several hundred million will be made to improve the basic infrastructure of the country, a major allocation of resources will be devoted to expansion of petroleum-related industry. Kuwait already has large, modern oil refineries and fertilizer plants. Contracts were signed in 1975 and work has recently begun on the Kuwait Gas Utilization Project (KGUP), which entails the gathering of gas produced together with the production of crude oil (associated gas). The most important element of KGUP will be a very large LPG plant that will be able to produce 5.5 million tons annually of propane, butane and natural gasoline.



INDUSTRY IN KUWAIT—*Several billion dollars will be spent on domestic infrastructure and industrial projects in coming years. Here, output of a Kuwaiti factory is handled by conveyor.*

Other projects under study

Several other major petrochemical plants are under serious consideration. The most important are for the manufacture of aromatics and for ethylene and polyethylene. A major new export oil refinery is also being planned. In addition, present capacity of refineries and fertilizer plants are to be expanded and such other petroleum-related projects as a lube oil refinery may be built. Meanwhile, major additions to Kuwait's oil tanker fleet are being made, and LPG and product tankers have been or are expected to be ordered to complement the new industries to be established. In all some $3 billion or more is expected to be earmarked for these projects over the next five years.

Apart from these large projects, several smaller industrial projects, mainly in the private sector, are planned or already under way. U.S. firms will participate in aluminum, canning and other projects, and there is a major trend towards construction-related industry including expansion of existing cement, concrete pipe, metal pipe, sand-lime brick and other industries.

A third major area of domestic expenditure will be for military programs. Although Kuwait's military forces will remain small, there is a significant program to improve Kuwait military equipment and facilities. In addition to major weapons programs, primarily for tanks, aircraft and surface-to-air missiles, the government will undertake such military infrastructure programs as new military airports, new naval facilities and a new military hospital. The various military programs are expected to cost on the order of $2-3 billion and this money will be spent by 1980.

Kuwait's foreign economic activities are becoming increasingly significant. As noted above, at the end of 1975 the government owned some $14 billion worth of foreign assets, and the Kuwait private sector was thought to own another $4-5 billion. In 1975 the government and its institutions committed bilaterally or through multilateral agencies some $2 billion in economic assistance. Kuwait's economic assistance and investment activity make it an important force in international finance. It is likely that Kuwait will remain very active as an aid donor and as an important investor abroad.

There is and will be considerable variety to Kuwaiti foreign ecomonic activity. A large portion of Kuwait's foreign aid has been going directly to Egypt, Syria and Jordan as direct grant assistance, and several billion dollars are "invested" abroad, mainly in London and New York, in short-term holdings in banks. Through intermediaries in financial capitals a great deal is invested in real estate or equities in capital markets. Kuwaiti institutions have become among the most active and important in underwriting and managing convertible bond issues.

In addition, however, the government and Kuwaiti institutions increasingly have sought to enter joint ventures throughout the world. In this manner Kuwaitis have seriously considered taking equity positions in such diverse projects as a major pulp and paper mill in Brazil, in iron, copper and bauxite mines in Africa, and in a major pipeline in eastern Europe. The Kuwait Fund for Arab Economic Development, whose authorized capital was in 1974 increased 500 percent, has begun to assist countries beyond the Arab world. Loans have been extended for projects in sub-Saharan Africa and South Asia. Meanwhile, Kuwaiti economic assistance and investment in the Arab world increased substantially in the last year or so. Major aid and investment commitments have been made or are being considered for Egypt, Syria, the Sudan, Yemen, Tunisia and Morocco.

Factors constraining growth

Not surprisingly, the rapid growth in the level and scope of Kuwait-based economic activities has been constrained by several factors. The most serious is manpower. Managers are in short supply, and pressures on both skilled and unskilled labor are rising. The price of labor is being bid up by the regional boom. There have also been periodic supply constraints, and inflation is a problem. Such facilities as housing and schools for newcomers, notably for Western managers, are strained. As with Kuwait's neighbors, port congestion emerged in 1975 as a serious problem. Ironically, since Kuwait's port is the most efficient in the Gulf, shippers directed goods bound for Iraq and Saudi Arabia to Kuwait. Thus, Kuwait's major port (Shuweikh) became overwhelmed. Efforts are being made to expand port facilities and to introduce better cargo handling procedures. By this spring normal waiting time for conference ships was about 15 days and for non-conference ships about 20-25 days.

A problem directly related to reduced oil production is that the availability of gas for power and as an industrial feedstock is strained. Presently gas production in Kuwait is determined by oil production, but sizable deposits of unassociated gas are thought to exist on and

offshore. Work has begun to tap the onshore deposits. Nevertheless, assuming no major increase in oil production, there will not be sufficient gas for Kuwait's electric power and industrial requirements until unassociated gas becomes available, probably after 1980. Where possible, oil will be used, but the combination of labor and energy constraints has caused at least one major project (a steel mill) to be dropped, and another (aluminum smelter) almost certainly will meet the same fate.

This reinforces the tendency to seek joint ventures abroad. Thus, Kuwaitis are seriously involved with steel and aluminum projects abroad. But there are constraints in the foreign investment area also. Some countries (Canada, Australia, Japan) have laws which tend to discourage foreign investment; in some countries (U.S., Germany) Kuwaiti investment has raised, momentarily at least, political problems. In many less developed countries (Brazil, Egypt, Turkey) there are economic or other problems that discourage actual investment even though as a matter of policy Kuwait would like to invest in such countries.

U.S. is favorite investment site

Kuwait has invested considerable amounts in both developed and less developed countries, but the constraints noted above have prevented Kuwaitis from investing as much or as quickly as they may have wished. One interesting result is that the United States has emerged as the single most desirable locus of investment. Particularly in light of Britain's continuing economic problems, the United States is the only country that is large, diversified and open enough to accept relatively large amounts of Kuwaiti investment.

In an effort to surmount some of the problems there has been a conscious attempt to develop new institutions. Thus, several new companies have been created in Kuwait. For example, a tourism and recreation company has been established to oversee new recreational projects in Kuwait. Several new specialized companies and institutions have been created to facilitate Kuwaiti investment activity abroad. Within Kuwait the government itself has been changed. The Ministry of Finance and Oil has been split into two ministries and a new company is being created to coordinate petroleum-related industrial activity. A new Ministry of Housing has been formed. As noted previously, Kuwait's financial community is expanding, and the private sector is also growing in reaction to the economic activity of the country and the region. It is worth noting that several American companies have established offices or joint ventures in Kuwait as well.

Between 1970 and 1974 Kuwait is thought to have contributed about $4 billion to the U.S. balance of payments. Since then oil company profits probably have been significantly reduced, but U.S. trade and Kuwaiti investment in the United States have expanded significantly. In 1975 U.S. exports to Kuwait were about 400 percent above 1972 levels; U.S. exports were almost $370 million in 1975 while Kuwait exports to the United States were only about $60 million. Kuwaiti investments in the United States are now thought to be on the order of $3 billion. Thus, in 1975 Kuwait probably contributed close to $1.5 billion to the U.S. balance of payments. Though the trade advantage we currently enjoy will not last as gas and oil exports increase in the near future, Kuwaiti investment in the United States should assure that on balance the country will continue to add to our balance of payments.

The several billion dollars that Kuwait will spend on its development over the next five years represents important potential business for American firms. In addition, the billions of dollars worth of projects outside the country financed by local funds add to the country's importance to American business. Finally, for new-to-area firms, companies that successfully work in Kuwait often have an entree to other booming markets in the Gulf region. There is, in short, virtually no limit to what American business can do either in Kuwait or together with Kuwaiti partners elsewhere, despite the small size of Kuwait itself.

Significantly, Kuwaiti officials and businessmen want very much to work with Americans. American firms have a generally good reputation, and their management, marketing and technological expertise are sought. On the other hand, Americans have been criticized in the past for lack of interest in Kuwait, inflexibility and other weaknesses. There are local factors that make doing business more difficult than many U.S. companies would wish, but European, Japanese and other businessmen seem somehow to cope with these problems. They aggressively seek to take advantage of the possibilities offered. They perceive benefits that are also available to American business.

Egypt-U.S. Group Offers Abstracts On 35 Projects

The Egypt-U.S. Business Council has sponsored a program to identify projects in Egypt suitable for joint ventures between Egyptian and U.S. businessmen. A team of experts from the United States headed by David C. Scott, chairman of Allis-Chalmers Corp., went to Egypt to gather information, analyze capabilities, and prepare individual abstracts on projects judged to offer profitable opportunities through cooperation. The abstracts, which have now been completed, contain sufficient information on each project to allow U.S. firms to determine their potential interest in the opportunity.

The initial list of projects reviewed by the team numbered over 250 individual proposals. Thirty-five were ultimately identified as meeting the criteria of the Business Council staff. The projects fall into 10 major product areas: food and agriculture (9 projects), pulp and paper (3), chemicals (3), textiles (3), rubber products (1), glass (2), electrical products (5), heavy manufacturing (2), iron and steel (5), and ship support projects (2). Projects were selected, in part, because U.S. technology or management expertise will be a significant factor; the project will be highly visible; and, the project will act as a catalyst for additional development.

Abstracts of these projects are available from the Egypt-U.S. Business Council, Chamber of Commerce of the United States, 1615 H Street, NW., Washington, D.C. 20062. The Chamber will provide 15 abstracts free to each interested U.S. firm. A flat fee of $20 will be charged for any number over 15. For additional information on upcoming Egyptian projects, or assistance in doing business in Egypt, contact the Business Facilitation Staff of the Commerce Action Group for the Near East, U.S. Department of Commerce, Washington, D.C. 20230 (202-377-4441).

Nigeria Clarifies Rules On Foreign Trade Papers

Banks in Nigeria have resumed writing letters of credit as a result of the Central Bank's issuance of new foreign exchange control regulations and the Ministry of Finance's release of port cargo clearance certificate directions. Banks had stopped writing letters of credit on April 1 due to the confusion caused by the government's ruling that all letters of credit must be prepaid in full by the Nigerian importer in naira to a bank in Nigeria. Confusion was compounded by the vague specification of the exact shipping documents required for letters of credit and the nonavailability of the new mandatory port cargo clearance certificate. The Central Bank has now made clear, in the regulations issued May 14, that banks need not demand advance deposits against letters of credit above usual levels for their customers.

The Central Bank has specified the shipping documents required for release of foreign exchange as follows: attested cable of confirmation of receipt of shipping documents including the port cargo

clearance certificate by the overseas correspondent bank; a proforma invoice; a copy of the Ministry of Finance form D as approved by an authorized dealer; and a copy of the letter of credit. The relevant shipping documents should be forwarded to the Central Bank by the Bank in Nigeria within two days of receipt of the cable from the corresponding bank. The relevant shipping documents are: the attested invoice; a copy of the nonnegotiable bill of lading; a copy of the certificate of insurance if available; and the port cargo clearance certificate.

The new port cargo clearance certificate directions may be obtained from the Nigerian Port Authority or the Nigeria Airways. The directions contain a copy of the clearance certificate, the bill of lading, and other relevant documents to be used by all ships and airline owners or agents carrying imported cargo into Nigeria.

The new clearance certificate states that the ship or aircraft is allowed to berth or land in Nigeria within a specified period. The ship or airline owners are to make copies of the port cargo clearance certificate available to exporters for attachment to the other shipping documents to be submitted to the overseas corresponding bank. The correspondent bank is required to sight the clearance certificate and the other relevant documents before payment can be made to the exporter.

Exempted items

The following essential items are exempted from the above provisions concerning port cargo clearance certificates: meat—fresh, chilled, and frozen; milk and milk products; butter; eggs; fish; wheat and flour; stock fish; rice; cereals and cereal preparations; malt; hops; sugar; salt; medicaments; industrial raw materials and equipment; spare parts and tools; fertilizers; building materials—tiles, cement, roofing nails; tubes; pipes; galvanized pipes and tubes; sanitary ware; wire netting; printing ink; newsprint; printing and writing paper.

Currently authorized dealers in foreign exchange in Nigeria are: African Continental Bank Ltd., Arab-Bank, Bank of India (Nigeria), Bank of America (Nigeria), Bank of the North, Barclays Bank of Nigeria, Co-operative Bank, Cooperative Bank of Eastern Nigeria, International Bank for West Africa, Mercantile Bank, New Nigeria Bank, National Bank of Nigeria, Pan African Bank, Standard Bank Nigeria, United Bank of Africa, Wema Bank, Nigeria Bank for Commerce and Industry, North Central State Cooperative Bank.

The new foreign exchange control regulations now allow travelers into and out of Nigeria to import or export up to 50 naira in Nigerian currency.

Outlook Seen Favorable For U.S. Trade With Fiji

Fiji's economy remained healthy through the world economic perils of 1975, reports the U.S. Embassy in Suva, and the outlook for U.S. trade and investment continues favorable.

Foreign exchange reserves rose to record levels in 1975, principally as a result of sugar earnings. Inflation was lowered to 13 percent, and there was a substantial improvement in the net balance of trade for the year. On the debit side, production in key agricultural sectors declined but there were real gains in diversification for development in other sectors. Controls over fiscal and monetary policy were being relaxed at the end of 1975 to accelerate economic activity and create jobs; unemployment appears to be the most serious economic problem.

Many U.S. products find a welcome market in Fiji, and are generally competitive with goods imported from other countries. This would include, in particular, high technology products such as computers and business machines, but American clothing, consumables and sports equipment are also popular items. U.S. manufacturers can take advantage of Fiji's single-line tariff, which places American-made goods on an equal customs footing with other products imported from abroad.

Many large American firms are already represented in Fiji through their Australian or New Zealand subsidiaries and agents, but a growing number of local firms are interested in handling U.S. products on a direct basis. One major constraint has been the paucity of available shipping from mainland U.S. to Fiji. On the Fijian side, one major positive development is the increased capacity of Suva to handle containerized cargoes and the more expeditious port handling of landed goods.

Fiji is rapidly becoming a regional center for international organizations and regional institutions. As a consequence of the growing regionalism and international focus, Fiji is a particularly good location for U.S. firms that wish to establish themselves in the South Pacific.

Fijian business regulations, policies and practices are generally straightforward and conducive to overseas investment. The government favors proposals which assist in developing Fiji on a sound economic basis, provide opportunities for significant local equity participation, provide employment opportunities for locals, involve maximum processing of products in-country, and involve maximum use and development of common facilities and infrastructure.

The government is keenly interested in enterprises which are directed toward agriculture and mineral development, and is prepared to negotiate long-term agreements with overseas firms in those areas. The Central Monetary Authority, Ministry of Finance, and Ministry of Commerce, Industry and Cooperatives all play a central role in clearing foreign investment proposals in Fiji.

The preponderance of American investment in Fiji has been in tourism and related activities. The future of tourism in Fiji is closely linked to conditions facing the tourist industry worldwide, and with recovery taking hold in the United States and other major economic powers there is cause for guarded optimism that the Fiji tourist decline has bottomed out. Statistics reveal that the tourist industry was hard hit in 1975. Visitor arrivals declined about 12 percent, nearly 20 percent among Americans.

The designation of Fiji as a GSP beneficiary country was greeted with widespread interest, and a few Fijian businesses can take immediate advantage of the opportunities this affords in the U.S. market. The absence of a wide industrial sector, however, has limited Fiji's ability to respond more fully to the GSP products' list.

The signing of an OPIC agreement in January is likely to have a positive influence on the nature and scope of U.S. investments in Fiji, and is an indication of Fiji's interest in attracting such investments.

During 1975 the U.S. dollar strengthened in relation to the Fiji dollar, which may have offset some of the advantages enjoyed by U.S. exporters early in the year. This enhances the climate for long-term investments in Fiji, however, and Fiji seems to be prepared to provide assistance and encouragement in several key areas.

Calendar For World Traders

July 8—Columbia, S.C.—Midlands International Trade Club dinner meeting, Town House Motor Inn. For information, 803-765-8146.

July 14—Nashville—World Trade Council of Middle Tennessee meeting, Ramada Inn, James Robertson Parkway.

July 22—Greenville, S.C. — Greenville-Spartanburg International Trade Club, Textile Hall. For information, 803-233-2562.

Aug. 5—Memphis—Mid-South Exporters' Roundtable (program on Brazil).

Worldwide Business Opportunities

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors abroad. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine.

The section that follows presents details about upcoming trade exhibits and trade missions, licensing and joint venture proposals, opportunities to sell to foreign enterprises and appoint agents, and details on major construction and expansion projects.

U.S. Promotions Abroad

For more facts on these and other U.S. exhibitions write: Director, Office of International Marketing, Rm. 4015, U.S. Department of Commerce, Washington, D.C. 20230. For trade missions: Rm. 6051, U.S. Department of Commerce, Washington, D.C. 20230.

U.S. Consumer Goods Catalog Exhibit at INTERFEREX 1976. Basel, Switzerland. Sept. 5-7. To be held in conjunction with INTERFEREX 1976, an international hardware trade fair which takes place every two years in Basel. Buyers from Switzerland and more than 20 additional countries are expected to attend. At INTERFEREX 1974, orders by Swiss purchasing agents alone totaled more than $65 million. Constant appreciation of the Swiss Franc against the dollar over a 4½-year period has made U.S. exports more price competitive in the Swiss market. U.S.-made goods which are a step ahead in design, efficiency, quality and marketing are generally favored in the sophisticated Swiss market. Robert E. Peterson, 202-377-3973.

Pollution Control Equipment Trade Mission to Belgium. Sept. 5-10. Rapid growth is anticipated in the Belgian market for air and water purification and other types of pollution control equipment throughout the last half of the 1970s. Total sales of these kinds of equipment are projected to reach $620 million by 1978, from an estimated 1975 base of $358 million. This represents a 21 percent average annual growth rate. Of this amount, water pollution control equipment will constitute 96 percent. This mission is being organized in conjunction with AQUATECH '76, which is scheduled to be held in Amsterdam, Sept. 14-18. Call Edward Oliver, 202-377-3746.

Do-It-Yourself Exbn, U.S. Trade Center, Tokyo. Sept. 6-10. Inflation, tight money, and the growing cost of services related to home rehabilitation, repairs, and maintenance as well as a renewed interest in personal creativity are encouraging growth in the do-it-yourself field. The market, $204 million in 1974, is projected at $505 million for 1978. This exhibition will display home/entertainment/garden do-it-yourself products and will include demonstrations by participating firms. Call John Wolf, 202-377-2461.

Computers and Peripheral Equipment Exhibition and Seminar. U.S. Regional Trade Center, Singapore. Sept. 6-10. With markets for computers and peripheral equipment expected to exceed $20 million by 1980, Singapore offers attractive opportunities to U.S. suppliers. Ten sectors of the local economy will contribute to this increased demand, all of it supplied by imports. In addition, regional promotion will draw potential customers from the Southeast Asia region. This event is timed to coincide with a major Asian computer conference to be held in Singapore. Robert McLaughlin, 202-377-2471.

Automotive Maintenance and Servicing Equipment Catalog Exhibit. Taiwan and Korea. Sept. 13-17. Prospects are good for sales of automotive diagnostic and repair equipment in both Taiwan and Korea. The development of local automobile manufacturing industries, the increasing number of vehicles operating, the large-scale improvement of highways and transportation facilities now under way, and the growing concern of the respective governments about traffic safety have begun to create a demand for a wider variety of more technically advanced as well as less sophisticated motor vehicle maintenance and servicing equipment. The automotive maintenance and servicing equipment market in both countries is relatively new. This catalog exhibit will help to educate the Korean and Chinese vehicle service organizations and personnel in the latest technology and the variety and utility of high-quality, efficient, labor-saving maintenance equipment available from the United States. Robert E. Peterson, 202-377-3973.

Metalworking and Finishing Catalog Exhibit. Zaire and Zambia. Sept. 13-21. Zambia and Zaire are almost completely dependent on imports for supplying the demand for this equipment. Priorities for both countries are equipment used to update, maintain and repair existing industrial machinery. In conjunction with further development of mining and smelting activities, as well as the ambitions of these countries toward development of metal products industries, demand for metalworking and finishing is expected to expand. Early advertising and vigorous export promotion efforts by U.S. suppliers should pay off. Robert E. Peterson, 202-377-3973.

U.S. Exhibition in AQUATECH '76. Amsterdam. Sept. 14-18. This prestigious exposition, expected to draw 40,000 visitors from around the world, is an excellent opportunity for U.S. firms in the water equipment industry to enter into or gain increased sales in the rapidly growing European market. In 1975, an estimated $650 million was spent on water purification and pollution control equipment alone in the Netherlands, Belgium, France and Germany. Due to implementation of stringent legislation and rising concern over water quality, investment in equipment in this field is expected to exceed $2.6 billion during the 1976-78 period. George Ruffner, 202-377-4941.

Process Control Instrumentation Exhibition. U.S. Trade Center, Taipei. Sept. 20-24. The market for process control instrumentation in the Republic of China is growing at a strong pace. Purchases are expected to reach $15 million by 1978, double the level of 1973. U.S. manufacturers are expected to supply about one-third of this market, which is concentrated in the petroleum, coke, coal, utilities, services, chemical processing and primary metals industries. Julian Hammond, 202-377-4304.

Food Processing and Packaging Equipment Exhibition. Caracas. Sept. 20-25. The U.S. has a 50 percent share of the Venezuelan market for food and beverage processing and packaging equipment, estimated at $113 million in 1975. Demand growth of 10 percent annually is expected through 1979. This event is designed to take advantage of Venezuela's quest for self-sufficiency in food, as the government programs surplus oil revenues into agriculture and industry. A full range of processing; forming, filling and sealing; wrapping and packaging; marking and inspecting; and container/product/package handling equipment is required for all types and phases of the industry. Thomas L. Thomas, 202-377-4230.

In-Store Promotion. Taby, Sweden. Sept. 23-Oct. 2. Taby Centrum, a large shopping center located 12 km. north of the center of Stockholm, will stage the first in-store promotion held in a shopping center. Over 35 stores will participate in this Bicentennial theme promotion, including the Domus and Nordiska Kompaniet (NK) department stores, numerous apparel specialty shops, and jewelry, gift and appliance stores. Interested suppliers contact Theodor Rumme, Asst. Commercial Attache, U.S. Embassy, Strandvagen 101, Stockholm. List of store names and contact persons available from Charles E. Johnson, 202-377-4705.

SPOGA 76 — Sporting and Camping Equipment. Cologne, Germany. Sept. 25-27. Considered by most manufacturers as the world's major international exhibition for sporting and camping equipment. SPOGA 75 hosted more than 1,400 exhibitors from 35 countries and, in only three days, attracted 30,000 trade visitors from 71 countries. Commerce's pavilion will accommodate 30 U.S. manufacturers of appropriate equipment. Robert Wallace, 202-377-3748.

Packaging and Bottling Equipment Exhibition. U.S. Trade Center, London. Sept. 27-Oct. 1. The United Kingdom imported $81.3 million (c.i.f.) worth of bottling and packaging machinery in 1975. The United States supplied 20.8 percent of the market, a share that expanded by 4.3 percent over 1974, reducing

the West German lead from 16.4 to 7.5 percent. While Britain represented 4.2 percent of the entire world market for all U.S. exports in 1975 (f.o.b.), it took 8.6 percent of U.S. exports of packaging machinery. This exhibition of U.S. canning, wrapping, packaging, bottling, filling and sealing machines, equipment, and accessories will be directed to end-user trade audiences in both the United Kingdom and Republic of Ireland. Craig S. Atkins, 202-377-2881.

International Plant Engineering and Maintenance Exbn. and Conf., Birmingham, England. Sept. 27-Oct. 1. Capital investment in the United Kingdom manufacturing sector is estimated at $91 billion. Current economic pressures are forcing British manufacturers to strive for more efficient plant engineering and maintenance operations. Annual expenditures for plant replacement are reported to be $6.9 billion, including $2 billion for materials. Recent U.S. technological developments provide American manufacturers with a decided advantage in supplying pollution control and safety equipment. Other product categories which offer good potential include materials handling equipment, heating and ventilating equipment, paint and corrosion treatments, lubrication equipment, pumps, valves and compressors, power generation and distribution equipment, maintenance tools, supplies and services, compressed air and hydraulics equipment, noise and vibration controls, and metalworking and welding equipment. Suresh (Sam) K. Dhir, 202-377-4421.

In-Store Promotion. Edinburgh. October. Jenners, the prestige retail outlet of Edinburgh, Scotland, will feature a U.S. Bicentennial promotion for two weeks. Product categories of interest include all types of apparel, fabrics, linens, housewares and furniture. Store contact: Mr. J. McDermott, Jenners, 48 Princes St., Edinburgh EH2 2YJ. U.S. buying office: Affiliated Traders Ltd., Attn. Miss Aeta Salba, 220 Fifth Ave., New York, N.Y. 10001. Mollie Cleveland, 202-377-4705.

Machine Tool Catalog Exhibit. U.S. Trade Centers, Singapore, Taipei, Sydney. October. Added feature is a sound and color video tape recording. Officials of key metalworking and finishing firms will be invited to view film and catalogs and talk to a representative of the National Machine Tool Builders' Assn., which is assisting with show. Frederic J. Gaynor, 202-377-3846.

Technical Sales Seminar in Pharmaceuticals. Poland and Hungary. October. Plans to expand pharmaceutical production and pharmaceutical imports in both countries makes this an event which U.S. pharmaceutical manufacturers should not pass up. Call Gary Roberson, 202-377-3376.

Port Development Technical Sales Seminar. Saudi Arabia, Egypt and Morocco. Oct. 3-15. Areas of specific interest include port consulting and engineering, deck and engine room machinery, materials handling and cargo control equipment, ship service and repair systems, shipyard productivity and improvement systems, anti-corrosion materials, anti-pollution equipment and communications and control equipment. E. Lee Carteron, 202-377-2973/4.

Building and Construction Equipment and Supplies Exhibition. U.S. Trade Center, Paris. Oct. 4-7. Excluding common stone and wood, the market for these products in 1975 was $15 billion and is expected to grow to $19 billion by 1980. For further information contact Robert B. Wallace, 202-377-4976.

Mineral Production & Processing Technical Sales Seminar, Jakarta and Kuala Lumpur. Oct. 5-14. Foreign investment contracts approved since 1967 valued at well over $500 million are still being implemented, and new contracts are now being generated as private participation interests are encouraged by the Indonesian Government in further development of the country's large mineral resources. Malaysia's acknowledged world leadership in the production of tin is realized in the nearly $600 million in annual exports: new tin production investment is growing as private participation contracts become more widely used in tin as well as in copper and coal extraction. Seminars conducted in these two countries will feature presentations from seven American companies on the fundamentals of modern extraction and processing of non-oil minerals of the area. Sales appointments with key buying officials will supplement the technical seminar sessions in each city. Contact W. Brad Tyrrell, 202-377-4304.

Business Systems Exhibition. Tehran Trade Center. Oct. 10-14. Iran is the fastest growing market for U.S. exports in the world. Over the last two years, our exports to Iran quadrupled to $3.2 billion. Much of Iran's approximate $20 billion oil income goes to industrial and business growth. This force-feeding of economic growth offers excellent sales opportunities for American suppliers of computers and business equipment. Within three years the Iranian import market for business systems will amount to $63.5 million. Don Ryan, 202-377-2952.

In-Store Promotion. Shalom Stores Ltd., Tel Aviv. Oct. 10-31. Shalom is planning a major Bicentennial promotion of U.S. consumer products. U.S. buying office is Marcent Int'l. Inc., Attn. Kurt J. Heilbronner, V.P., 200 Park Ave., Suite 5305, New York, N.Y. 10017. Mollie Cleveland, 202-377-4705.

Electronic Components Catalog Exhibit. Barcelona. Oct. 11-19. To be held in conjunction with the Image, Sound and Electronic Trade Fair (Sonimag), a major annual event in Spain. In 1975, U.S. exports of electronic components to Spain amounted to approximately $3 million. The Spanish Government has ambitious plans for expanding the electronic/telecommunications industries. In 1974, it decreed preferential interest to the electronics industry. Demand for electronic equipment is expected to increase by 13 percent annually, and production by 17 percent, presenting excellent opportunity for U.S. exporters. Robert E. Peterson, 202-377-3973.

Chemical Industry Equipment Exhibition. U.S. Trade Center, Milan. Oct. 12-16. Italy's chemical industry is the fourth largest in Europe, with production of primary chemicals totaling $12.7 billion in 1974. Estimates through 1990 indicate that the chemical sector will enjoy growth rates of around 20 percent annually over the total period. U.S. technology in this field is highly regarded. Held concurrently with the MAC International Chemical Exhibition at the same location, it will provide U.S. firms access to a number of European and Mediterranean markets. Sam Spaulding, 202-377-4508.

Energy Systems Technical Sales Seminar. Madrid, Barcelona, Belgrade and Zagreb. Oct. 17-30. Rapidly increasing power needs requiring the development of hydroelectric, thermoelectric and/or nuclear power, plus improving economic conditions, provide significant opportunities for U.S. technology and equipment sales in Spain and Yugoslavia. Sales of energy equipment and systems will grow in accordance with Spain's Energy Plan, which calls for doubling energy production in the next decade. The Yugoslav Government has set a goal of expanding hydroelectric plants from 4,600 MW to 9,400 MW and thermoelectric plants from 4,000 MW in 1975 to 10,500 MW in 1980. Jonnell Jacobson, 202-377-4918.

Electronic Components Catalog Exhibit. Amsterdam. Oct. 18-22. To be held at the International Industrial Electronics Trade Fair (FIAREX), the key Dutch trade event focusing on this theme. The Netherlands is an important market for sophisticated electronics, as it is a major producer of telecommunications equipment, computers, electronically controlled industrial equipment, instruments, and consumer products. Agents and distributors of electronic components are eager to locate new suppliers or to learn about the newest U.S. products. Robert E. Peterson, 202-377-3973.

Technical Seminar on Machine Tools. Czechoslovakia, Hungary and Bulgaria. Nov. 6-20. These countries offer growing markets for U.S. manufacturers of machine tools. Company participants will present technical papers in each country to a highly select audience of buyers, technicians, and end-users. Contact Judith Robinson, 202-377-3376.

Commercial/Industrial Safety & Security Equipment Exhibition. U.S. Trade Center for Scandinavia, Stockholm. Nov. 8-12. A highly developed awareness of safety/security needs exists in both the public and private sectors of the four Nordic countries. Recent surveys of the markets of Sweden, Norway, Denmark and Finland have identified excellent sales opportunities for U.S. exporters of advanced safety/security products that have applications in offices, factories and institutions. Indicative of this market potential are U.S. exports of this equipment to the Nordic countries—$28 million in 1975, a 37 percent increase over 1974. In Sweden, home of many large multinational corporate headquarters, the U.S. supplies 11 percent of the $35 million fire safety equipment and 15 percent of the $32 million security equipment import markets. Call William Beiring, 202-377-3276.

Computers and Peripheral Equipment Exbn. and Seminar, U.S. Trade Center, Sydney. Nov. 8-12. The Australian computer/peripheral market is currently valued at over $211 million. The U.S. is Australia's leading supplier with a market share of about 50 percent. However, competition is intense with strong competition coming from the U.K., West Germany and Japan. Total computer consumption in New Zealand totaled $14 million in 1974; the U.S. accounted for $4.2 million. An annual growth rate of 10-15 percent is predicted. Call Don Mathes, 202-377-4957.

Communications Systems & Equipment Exbn. U.S. Trade Center, Taipei. Nov. 15-19. Taiwan, a booming market primarily oriented to U.S. sources for its substantial imports of advanced hi-technology communications gear, has embarked on a massive modernization and expansion program. Heavy growth is seen from 1977-78, especially in telephone

equipment needs. This event will feature data communications with latest dial-up systems, C.C.T.V., microwave, transceivers, and monitoring & testing gear. High sales prospects are further supported by a U.S.-source Eximbank loan of $27 million for PABX boards, coax cables, microwave, toll switching, traffic counting and engineering/consulting services. Dave Horridge, 202-377-2798.

Food Processing and Packaging Equipment Specialized Trade Mission. Kenya, Cameroon and Ivory Coast. Nov. 15-30. These countries are among the many developing nations which are paying increasing attention to the problem of food supply and the development of agriculture-based export industries. The mission will visit Nairobi, Kenya; Yaounde and Douala, Cameroon; and Abidjan, Ivory Coast. Participation is open to U.S. suppliers of machinery, equipment and services for grain milling, sugar processing, dairy processing, butchering and meat and poultry processing, fish catching and processing, baking, ice-cream and candy making, edible oil processing, freeze drying, dehydration, refrigeration and packaging. For information call Bertie Renborg, 202-377-3741.

Engineering Design Components. U.S. Trade Center, Milan. Nov. 23-27. Components, materials and technology in the machinery, automotive, aerospace, and other equipment and electro-mechanical industries will be featured. Transmission components, hydraulic and pneumatic components, electrical and electronic controls, special materials, shapes and forms, joining systems and components are included. U.S. products have tremendous potential in this market. Runs concurrently with BIAS, international automation engineering exhibition, at the same fairgrounds. J. Michael Springmann, 202-377-4975.

HEVAC-76 International Trade Fair. Tehran. Nov. 24-30. The United States is still Iran's No. 1 supplier, claiming better than a 20 percent share of a market the U.S. Department of Commerce predicts will go to $40 billion by 1980. The rapid increase in population, the jump in national income as a result of oil price increases and a dramatic rise in the standard of living within the past decade have considerably intensified construction requirements in Iran, particularly in housing. The market for HEVAC equipment has grown from $150 million in 1975 to an estimated $340 million in 1976. According to the Fifth Development Plan (1973-1978), approximately $6 billion is targeted to improve the housing situation. In order not to let these orders go by default to foreign competition, the U.S. Department of Commerce is planning this showcase for heating, ventilation, air-conditioning, plumbing, refrigeration and sanitation equipment, architects/engineers and contractors. Call Franc Manzolillo, 202-377-2991.

Electronica 76. Munich. Nov. 25-Dec. 1. Germany's total consumption of electronic components is predicted to exceed $1.7 billion in 1977, while the market for electronic production and test equipment is expected to reach $343 million. In both categories, imports account for more than 40 percent of the entire market and the United States is the country's leading supplier with a share of about 28 percent. Best sales opportunities exist for U.S. exporters of color TV tubes, capacitors, resistors, integrated circuits, diodes, transistors, production and test equipment, and materials. Best market prospects are in computers, measuring and testing instruments, industrial equipment, and medical electronic equipment. Don C. Schmadel, 202-377-2177.

Telecommunications Equipment & Systems Exhibit (JEEP). Paris. Nov. 29-Dec. 2. Significant opportunities for exports should arise in the entire telecommunications market as a direct result of the French Government's recently announced massive program to increase the telephone system's capacity some 300 percent during the period 1976-1980; about $10 billion will be expended on equipment purchases. Some 6-8 new-to-market firms will be eligible for this event. Contact Ned Krause, 202-377-5381.

Analytical Instruments for Science and Industry Exhibition. U.S. Trade Center, London. Nov. 29-Dec. 3. The British market for analytical instruments for science and industry was valued at $85 million in 1974. Expanding technology, increased investments by industrial and government laboratories, and a general economic recovery should push the market to $100 million in 1979. Imports from the United States, which account for more than 25 percent of the total market, are expected to jump from $22 million in 1974 to $32 million in 1979. U.S. firms are the leading import suppliers of four categories of products--automatic analyzers, gas chromatographs, oscilloscopes, and atomic absorption spectrophotometers—and have obtained a large share of the British market through their technological superiority and effective marketing practices. Robert L. Bradshaw, 202-377-4461.

Metalworking, Finishing Equipment and Machine Tools Product Literature Display. Johannesburg and Cape Town. Nov. 29-Dec. 8. In 1972, South Africa's apparent consumption of metalworking, finishing equipment and machine tools registered $68.8 million; for January-September 1975 this figure rose to $161.1 million. Local production accounts for only about 6 to 7 percent of these market figures. Over the last few years, there has been substantial growth in the local industries that rely on the machine tool industry, partly because of the need to upgrade quality as a result of the increasingly stringent local programs supporting South African industry. This product literature display should provide an excellent opportunity to attract the attention of South Africa to the latest advances in technology in U.S. products. Robert E. Peterson, 202-377-3973.

Pulp, Paper and Converting Machinery and Equipment Trade Mission to Brazil. Dec. 1-10. The Brazilian pulp and paper industry has grown rapidly over the last ten years in order to satisfy an exploding domestic demand. Production doubled in the 1967-1973 period alone. Foreign investors have begun showing interest in Brazil as a source of pulp and paper for the world market over the medium and long-term. To date, exports have not been significant, and imports have grown substantially. However, ambitious plans have been announced to make Brazil both self-sufficient in paper and a major exporter of pulp (two million tons) by 1980. Investments of $2.75 billion will be required for achievement of the 1980 goals. Forty percent of this, or $1.1 billion, has yet to be committed, according to government figures. Longer-term goals (over the next 20 years) see investment of $17 billion in the pulp and paper industry and export earnings of $51 billion. Call William J. Bushwaller, 202-377-4511.

Industrial Process Controls Exhibition and Seminar. U.S. Regional Trade Center, Singapore. Dec. 6-10. The Singapore Government's plans for a major petrochemical complex and new construction in the electrical energy sector are expected to push sales of process control instrumentation to $12.5 million by 1978. Singapore's requirements for these products are met entirely by imports. To participate contact J. Lee Barnes, 202-377-3893.

ECOLOGY '77—Environmental Purification and Pollution Control Instrumentation and Equipment. U.S. Trade Center for Scandinavia, Stockholm. Dec. 6-10. Sweden, Norway, Denmark and Finland, currently and individually warring against pollution, have programmed an aggregate total of $2 billion plus to be spent on environmental protection by 1984. A significant portion of this amount will be earmarked for the purchase of instrumentation, equipment and controls. Robert J. Blake, 202-377-3088.

Plant Engineering and Operations Equipment Exhibition. U.S. Trade Center, Mexico City. Dec. 6-10. Mexico's rapid strides toward industrialization have created a strong demand for broad-based plant modernization equipment. This show will feature and focus in on selected lines of equipment designed for inside-the-plant operations, principally in the areas of: industrial water treatment; specialized materials handling devices; assembly line automation; industrial machinery lubrication; in-plant pollution prevention and control; and pneumatic/hydraulic controls and systems. All of these categories are finding an increasing market within the sectors of Mexican medium and heavy industry establishments which are desirous of achieving higher output and efficiency through plant modernization. Damon LaBrie, 202-377-4463.

Offshore International Exhibition. Birmingham, England. Dec. 7-10. The continuing development of North Sea oil resources offers good opportunities for U.S. suppliers of oil and gas field exploration, production and transmission equipment, instruments, systems, supplies and services. U.S. exports of oilfield equipment and pipe to countries active in the North Sea oilfields are substantial and growing. U.S. exports to the United Kingdom alone in 1975 totaled $32 million, up from $19 million in 1974 and $11 million in 1973. Demand is highest for oilfield equipment and pipe, but sales opportunities also exist for a wide range of supportive products, e.g., floating structures (rigs, barges, vessels, tanks, etc.), helicopters, telecommunications equipment, valves, processing and field instruments, welding equipment and drilling fluid. At least five new North Sea fields are expected to open by the end of this year. A $3 billion market for products and services is expected in 1976, with the total rising to $5 billion by 1980. Official exhibits will be mounted by many countries. George A. Kemp, 202-377-3713.

Advance Business Equipment and Systems Exhibition and Seminar. Taipei. Dec. 13-17. This JEEP (Joint Export Establishment Promotion — for new-to-market participants only) will focus on a rapidly growing market in the Republic of China. The economy in Taiwan has recovered strongly from the recent world recession. Imports of U.S.-produced business equipment and systems are expected to reach $17.5 million by 1979—up from $11.2 million in 1974. Peter Wilson, 202-377-4227.

Licensing, Investment Abroad

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Overseas Products and Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to any of the specific proposals listed.

WTDR indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230, or from any Commerce District Office.

OPIC indicates that the country involved is eligible for investment insurance coverage and financing from the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

NIGERIA—Consulting firm with government and private clientele is interested in making contacts with U.S. firms active in following: **roadbuilding, grain-storage construction; food processing; poultry production; also production of medical equipment, telecommunications equipment, pharmaceuticals, fertilizers.** Representative of company is in U.S. for discussions with interested American firms. Overseas Products & Investment Opportunities Staff, Office of Export Development, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76478. OPIC.

2035, 2032—ARGENTINA — Consulting firm seeks licensing arrangements with U.S. firms engaged in **food processing,** particularly **dietary and pickled foods.** Leon Mehl, Mgr., Dresdner & Assoc., Suipacha 472, Piso 2, Of. 203, Buenos Aires. P-76516. OPIC.

2087—MEXICO — License is sought to make **softdrink flavor concentrates.** Firm is expanding its line to include flavors of fruit not grown in Mexico, including blueberry, boysenberry, root beer. Company seeking technology is large, was established in 1950, is manufacturer of fruit juices and flavor concentrates such as pineapple, grapefruit, orange, lime, lemon. Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. WTDR. P-76480.

2211, 2221—MEXICO — U.S. technology desired to produce **high-quality polyurethane covered fabrics.** Interested firms should send samples of finished product. Representative of firm is prepared to visit prospective business associates. Firm is large, was established in 1961, manufactuers laces, scarves, tablecloths, curtains. Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. WTDR. P-76481.

2599—GERMANY—A leading manufacturer of **hospital and other medical furniture** seeks licenses to expand its production. Company was established 1901, has 1,200 employees. L. & C. Arnold GmbH, Postfach 13, Arnoldstr. 13, 4152 Kempen 1. P-76482.

2649—SAUDI ARABIA—Seeks joint venture to **convert waste paper products into cardboard for use in roofing materials, luggage and boxes.** Proposed plant would produce 15 to 20 tons of cardboard per 5½-day week. U.S. participant asked to provide machinery, technical know-how, 30 percent of capital. Saudi firm will invest 70 percent. Saudi company produces, distributes all types of paper and board. Employs 310; reports annual sales of $5 million. Walt Blomquist, Exec. Dir., International Agents, P.O. Box 922, Jidda; telex, 56-7482 INTERMETAL ORL, attn: ITC; phone, 21750. P-76479. WTDR. OPIC.

2834—FRANCE—Seeks licenses to manufacture **sustained-release capsules mainly for cardiovascular system and anti-inflammatory drugs.** Will also consider any type of pharmaceutical preparation. Established 1921, firm is part of LABAZ group (Petrole d'Aquitaine). Employs 825, has annual sales of $23 million; is manufacturer and sub-contractor for pharmaceutical products. Mr. Dubois, Marketing and Sales Mgr., Fevrier Decoisy Champion S.A., 60, rue de Wattignies, 75579 Paris Cedex 12. Telex, 680 287; telephone, 343-7800. P-76483.

3241—SAUDI ARABIA—Seeks to establish **storage and packing cement plant** with capacity of one million tons per year at coastal point in Saudi Arabia. Plan calls for import of cement in bulk, storage in silos for packing in bags, and sales in bags or bulk to local consumers. Firm desires joint venture arrangement or supply and technical assistance. National Industrial Co., P.O.B. 1394, Riyadh. Cable: RIALCOM. P-76484. OPIC.

3295—ARGENTINA — Firm seeks contact with interested U.S. companies to establish joint venture operation for exploitation of **kaolin reserves** in Chubut, south of Argentina. Concern owns, operates well-known porcelain plant in Monte Grande, near Buenos Aires, where it manufactures insulators. It also owns land in Chubut where it obtains kaolin for use at Monte Grande plant. Kaolin reserves are estimated at nearly 200 million metric tons. American firms should be in position to provide know-how and some capital investment; Argentine company will contribute capital investment and mineral reserves. Prof. Leopoldo A. Armanino, Pres., Fabrica Argentina De Porcelanas Armanino SAIC, Piedras 383, 4 Piso, 1070 Buenos Aires. Telephone: 331071. P-76485. OPIC.

3296 — GERMANY — Seeks licensing arrangement and technical assistance for production of **insulation materials** against heat, cold and sound. Firm is particularly interested in obtaining technical know-how to produce insulation from mineral wool for use in tubes and pipes. Company is one of West Germany's leading manufacturers and worldwide exporters of various types of insulating and lagging materials, putties and paints for use in building and construction trades. Established in 1928, employs 4,000. Otto Haus; Rheinhold Mahla AG, Augusta Anlage/ Karl-Reiss-Platz, VKI Haus, D-6800 Mannheim. Cable, KUNDSTSTOFF-UNION; telephone, 0621-40011; telex, 463167. P-76486.

3312—FRANCE—Small company specialized in manufacturing large **metallic structures** for various consumer industries such as truck manufacturers, railroad companies, crane manufacturers, is interested in producing under license allied products. Employs 80 skilled workers, operates facilities covering more than 5,300 sq. meters. Patrick Smyl, Service Commercial, Societe Monnin, 109 route de Conches, 71670 Le Breuil. P-76487.

3400, 3700—BELGIUM — Manufacturer of **railroad rolling stock, cranes, bridges, bus frames and metal fabrications** is interested in licensing arrangement to produce **allied products.** For further information write Ms. Doris Atkind, Trade Promotion, European-American Bank &

Important Notice

Most member countries of the League of Arab States employ a secondary boycott against foreign firms which undertake certain specific types of business relationships with the State of Israel. The Commerce Department will not disseminate or make available for inspection any tenders or trade opportunity documents which contain conditions intended to support such boycotts, or which are based on documents known to contain such provisions. Trade or investment opportunities published herein are not presently known to be subject to such conditions. However, it is possible that U.S. firms responding to opportunities from Arab countries may be asked at some stage of a transaction to participate in an Arab boycott-related restrictive trade practice as defined in the Department's Export Administration Regulations (15 CFR, Part 369 et. seq.).

Firms are reminded that pursuant to Section 3(5) of the Export Administration Act of 1969, as amended, it is the policy of the United States (a) to oppose restrictive trade practices or boycotts fostered or imposed by foreign countries against other countries friendly to the United States, and (b) to encourage and request U.S. concerns engaged in the export of articles, materials, supplies, or information to refuse to take any action, including the furnishing of information or the signing of agreements, which has the effect of furthering or supporting such restrictive trade practices or boycotts. Accordingly, U.S. concerns receiving such requests to participate in a restrictive trade practice or boycott are encouraged and requested to refuse to comply with them.

Firms are further reminded that U.S. concerns receiving requests to participate in a restrictive trade practice or boycott must report such receipt to the Department of Commerce in accordance with Section 369.4 of the above-cited regulations.

Trust Co., 10 Hanover Sq., New York, N.Y. 10005; telephone, 212-437-4300. P-76488.

3411 — FRANCE — Representative of French firm is seeking licensing agreement with U.S. firm for manufacture of **food containers** which can be encased and stacked when empty. Containers should be manufactured either in plastic material, steel wire or light metal sheet. Pierre-Alfred David, Consultant, 18, rue Jacquot Defrance, 54520 Laxou. P-76515.

3469—EGYPT — Firm desires to enter into joint venture with U.S. firm for production in Egypt of **enameled utensils and cookers.** Company, established 1964, has capital of US$1 million and annually produces 800 metric tons of enameled housewares, butane gas cookers and street traffic lights. Plans expansion of its metal enameling department, by installing new machinery and using modern technology to produce 5,000 metric tons per year of kitchenware and butane gas and electric cookers. Presently has under construction a 17,000 sq. meter building for housing new plant. U.S. firms interested in project are required to supply machinery, equipment and technology to complete plant, including necessary dies, production process documents and training of Egyptian technicians and engineers. Alexandria Metal Products Co., S.A.E., 72, Shaheed Galal Dessouki St., Alexandria. WTDR. P-76514. OPIC.

3500 — GERMANY — Manufacturer of materials handling equipment wants to expand its product line. Is interested in licenses to produce **grinding machines, coil compressors, wire twisting machinery, testing and dressing equipment, steel building constructions and paper and materials handling machines.** Firm employs 400, markets in EEC, EFTA, other countries. Good reputation. J. H. Schmitz & Soehne, Koenigstr. 47, 41 Duisburg 17. P-76489.

3500 — SWEDEN — Large supplier of **materials for building construction industry** wishes to conclude cooperative arrangement with U.S. firm to join in bidding on supply contracts in third countries. Swedish firm is often asked to supply full range of building materials and equipment, including following: sanitary equipment, electric water bottle coolers, cold water booster systems, electric water heaters, fire extinguishers, boilers, pumps, compression tanks, air separators, air handling units, exhaust fans, temperature control systems, louvers, lighting and power panel boards, transformers, lighting fixtures, telephone systems, fire alarm systems, diesel electric generating units and controls, hydropneumatic pressure systems and elevators. Lars Lindblom, Ahlsell & Agren AB, RVS Central Export, Fack, S-104 60 Stockholm. Telephone, 08/14 01 60; telex, 11666. WTDR. P-76490.

3523—SAUDI ARABIA — Seeks technology, know-how for **machinery utilized in farming, cattle and sheep breeding.** Abbas Ali Nour, Partner, Saudi Marble Co., P.O. Box 1187, Jidda. P-76440. OPIC.

3530, 3551, 3559—NORWAY—Seeks joint venture or licensing agreements to **manufacture engineering products** to be marketed in western and eastern Europe and East Asia. Suggested fields include petrochemicals, anti-pollution, food processing, building and construction, and forestry. Company is 1968 amalgamation of two long established firms. Employs 750 in Norway, has subsidiaries in Spain and Japan. Firm, member of Kvaerner Group with 7,000 employees, just moved into new $40 million plant with metal foundry, plate and machine shop. Items produced include pumps, filters, separators, locomotives, armored vehicles and machinery for pulp and paper industry. Narve Hundseid, V. Pres., Industrial Div., Thune-Eureka A/S, POB 38, N-3401 Lierbyen. P76491.

3540, 3554—SWEDEN—One of Sweden's largest firms seeks **marketing arrangement** with one or two U.S. firms to bid on international tenders. Two product areas of interest to Swedish organization are machine tools of all types, and paper converting machinery. Company is prepared to send engineer to U.S. to discuss details. Interested manufacturers or large scale distributors should write: Bendix Morsten, Mng. Dir., Elof Hansson International AB, Forsta Langgatan 19, S-413 03 Goteborg. Telephone, 031/12 46 00; telex, 2530. P-76492.

3545 — SWITZERLAND — Manufacturer and representative of metal-working machine tools, dies and related accessories is interested in licensing agreements to produce **parts and accessories for use** with machine tools. Would include automatic loading arms, feeding systems, hydraulic parts aud complete systems for automatic controls of industrial machinery. Eastblished 1941, employs 100. A. Habs, Director, Prematex SA, Fabrique de machines-outils, 31, Rue de Lausanne, 1110 Morges. P-76493.

3564—JAPAN — Seeks unique, advanced technology to produce air cleaning, **deodorization and sterilization units or combinations** of such equipment for use in rooms and buildings. Firm is a leading manufacturer of unit type air conditioners and fluoro chemical products. Has annual sales of $300 million, employs 6,200. Operates four plants in western Japan, has sales offices in major cities. Has various licensing agreements with foreign concerns covering air conditioners, hydraulic transmissions and compressors. Minoru Yamada, Pres., Daikin Kogyo Co., Ltd., Shin-Hankyu Bldg., 8, Umeda, Kita-ku, Osaka 530. P-76494.

3568—FRANCE—Seeks license to manufacture any **power transmission equipment.** Firm produces gears, transmissions, speed changers, drives. Employs 300; annual sales, $7.5 million. Good reputation. Jacques Wybo, Commercial Mgr., Constructeurs Associes de Transmissions et Engrenages de Precision, CATEP, 51, boulevard St. Denis 92405 Courbevoie. P-76495.

3569—BRAZIL—Producer of sewage and industrial waste treatment equipment seeks license to manufacture **rotostrainers** for sewage treatment. Firm makes aerators, automatic screens, equipment for settling tanks and separators for locomotive fuel systems. Its well equipped plant is located in one of main industrial centers of Rio de Janeiro. Dr. Marcello Dantas Leite, Superintendente, GEOSAN Equipamentos e Engenharia de Saneamento Ltda., Rua Rodrigo Silva 34-6° andar, 20000 Rio de Janeiro. WTDR. P-76496. OPIC.

3569 — UNITED KINGDOM — Seeks licenses to manufacture any type of **packaging equipment, laminators or label-making machinery.** Firm currently produces flexographic printing machines, polythene bagmaking machines and extruders and web guide control equipment. Employs 300, is subsidiary of large company. A. F. Davies, Mng. Dir., Simon-VK Ltd., Arrowebrook Ltd., Upton, Wirral L49 0XB, England. P-76497.

3585—AUSTRIA — Seeks to collaborate with U.S. firms in **international marketing** ventures particularly in Austria, Eastern Europe and Middle East. At present, firm is primarily interested in **industrial and commercial air conditioning equipment, industrial process machinery and materials handling equipment.** Company prefers to handle products requiring some kind of input such as assembling, engineering, or addition of locally manufactured components. Also wants to produce under **license or joint venture high technological products.** Specializes in fabrication of metal and plastic goods primarily for laboratory and industrial use. Anton Kornfeld, ROTARY — electronic Ges.mbH, Sportsplatzgasse 5, A-2525 Guenselsdorf. P-76498.

3585—NIGERIA—Firm seeks joint venture arrangement with U.S. company for manufacture of **air conditioners.** Specializes in installation and maintenance of air conditioning and ventilation systems. George Spiropoulos, Pres., Chemech Engineering Co., P.O. Box 1991, Lagos. P-76499. OPIC.

3600—UNITED KINGDOM—Large manufacturer and distributor of **ignition equipment, lighting equipment, switchgears** seeks licenses. Is interested in making any products compatible with its present lines. Employs 15,000, has annual sales of $200 million. J. V. Wilkinson, Director & Gen. Mgr., Lucas Electrical Ltd., Great King St., Birmingham B19 2XF, England. WTDR. P-76500.

3612—ITALY — Well known manufacturer of distribution transformers up to 2,500 kv.-a. seeks license. Wants technical know-how to produce **aluminum windings** to replace those of high conductivity copper presently used in their transformers. Is eager to conclude licensing arrangement with U.S. company. Ing. Zennaro, Owner & Pres., Zennaro Construzioni Elettriche S.A.S., Via Volta 4/C 30175 Voghera. P-76501.

3622—GERMANY — Interested in cross licensing, exchanging technology in the field of **electrical and electronic steering and drive systems.** Areas of interest include **direct current servo motors, step motors and associated equipment.** Established in 1904, firm has 20 employees. Has 11 sales representatives in Germany. Eduard Bautz, Eduard Bautz GmbH, Stiftstrasse 10, 61 Darmstadt. Telephone, 06151-44001; telex, 4-19461. P-76502.

3660—BRAZIL — Medium-sized manufacturer of telecommunications equipment seeks license. Wants to produce **time division multiplexing, modem for transmission of data and electronic telex centers.** Firm makes teleprinters, transmitters, telephone coils, receivers and related electronic components. Has 250 employees; sells throughout Brazil. Supplies Federal Government entities. Sergio Henrique Silva, Presidente, E. E. Equipamentos Electronicos S.A., Rua Frei Fabiano, 215, 20.000 Rio de Janeiro. WTDR. P-76503. OPIC.

3662—NEW ZEALAND—Seeks licensing or joint-venture arrangement for manufacture of **ceiling or wall-mounted smoke alarms for household, hotel and other domestic uses.** G. John Farmer, Mng. Dir., G. J. Farmer Ltd., P.O. Box 38-396, Auckland. Cable, INJUN: telex, NZ2974; telephone, 566-817. P-76504.

3662—UNITED KINGDOM—Seeks licenses to manufacture **encoders and decoders and other electronic parts for use in audio-visual equipment.** Firm designs and produces audio-visual presentations, also designs software. Has designed and

manufactured three-screen audio-visual presentation system. Gustaaf Thies, Chairman & Creative Dir., Sonicon Ltd., 2 Bentley Ct., 72 Kensington Gardens Sq., London W2 4DQ, England. P-76505.

3679, 3545—SWITZERLAND—Seeks collaboration with U.S. firms to produce **diamond discs** for industrial use and **quartz crystals** for electronic applications including digital watches. Firm is small, well established, highly specialized manufacturer of industrial diamonds, diamond tools, needles, etc. Employs 32 people. Benz Mikrodiamanten, Landstrasse 20, 8450 Andelfingen. P-76506.

3714 — FRANCE — Firm interested in manufacturing under license **automotive equipment or accessories and technical equipment** which could be produced in its iron foundry. Firm has three departments: foundry, mechanical construction, industrial equipment. Company employs 400, reports annual sales of $13 million. Lionel Vessiere, Ets Chenesseau, 19, avenue de la Liberation, B.P. 2239, 45012 Orleans Cedex. Telex, 780 154; phone 38 87-81-00. P-76507.

3724 — FRANCE — Seeks licensing arrangement to manufacture **avionics equipment.** Items of particular interest are engines, high precision mechanical parts and components. Presently manufactures spare parts for French and foreign jets, fittings for aeronautical industry, high precision mechanical tools. Also repairs following types of aircraft engines for French Ministry of Defense and private companies: Pratt & Whitney, Wright, Continental, Lycoming, SNECMA, Renault, Regnior and Potez. Firm established 1957, employs 385. Charles Jouffre, Commercial Mgr., Societe de Construction et de Reparation de Materiel Aeronautique, 6 rue Marceau, 92133 Issy-les-Moulineaux, France. WTDR. P-76508.

3823—INDIA—Seeks technical assistance for manufacture of **flow sensors, digital indicators, controllers and recorders.** Firm proposes to establish new plant in Nagpur's Industrial Park, about 520 miles from Bombay. Company is willing to import balancing machinery. Proposal envisages marketing 80 percent of proposed production locally, and exporting remaining 20 percent. Project falls under India's small industry category and therefore does not call for industrial license from Indian Government. Firm plans to determine project details in consultation with potential U.S. partner. N. S. Chandak Courtney, Process Instruments Manufacturing Co., 129A Ramdaspeth, Nagpur 440 010. WTDR. P-76454. OPIC.

3823 — SWITZERLAND — Well known concern seeks, for affiliate in Germany specializing in process control and automation, license and exchange of know-how in two fields: **software and complete programs for application in advanced electronic process automation and control, involving single machines to full scale production plants;** and **related programming and input units, as well as systems and devices for interfacing of control and indicating instruments.** Swiss corporation employs over 1,200, has plants in Netherlands, Italy, France, Germany. Specializes in process control and automation. Fritz Weber, Pres., Weber, AG, 6020 Emmenbrucke. P-76509.

3842, 3069—GERMANY—Seeks licensing arrangement and technical know-how for manufacture of **synthetic and natural gloves** for medical, surgical and industrial use to complement its existing line. Firm, established 1948, manufactures and distributes personal safety products, including rubber gloves of various types. Has developed into one of West Germany's largest manufacturers in this field. Sells on worldwide basis. Guenter Pape, Prokurist, Rex Gummiwarenfabrik, Ostendstrasse 5, D-6102 Pfungstadt. Telephone, 06157-2057; cable, GUMMIFABRIK PFUNGSTADT. P-76510.

3861—UNITED KINGDOM — Producer and designer of audio visual presentations seeks joint venture arrangement for manufacture of **audio visual equipment.** Company has designed and manufactures Sonicon MM-330, a three-screen audiovisual presentation system, which can accommodate six slide projectors (80- to 140-slide capacity) or three filmstrip or film cassette projectors or combination of both to provide mixed-media presentations. Sound is provided through two 8-ohm high-fidelity speakers under screen housing, each capable of handling up to 100 watts of continuous power. U.S. company will be expected to provide financial backing and possibly marketing expertise. For further information, write: Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76511.

Malaysian Investment Talks Scheduled For U.S. In Fall

The Malaysian Federal Industrial Authority, in cooperation with three major American banks, is sponsoring a series of investment conferences in the United States this fall. Primary purpose of the conferences is to highlight investment opportunities in Malaysia. The tentative schedule calls for seminars in San Francisco, Sept. 23-24; Chicago, Sept. 27-28; and New York, Sept. 29-30.

The Malaysian delegation will be led by the Minister of Trade and Industry, Datuk Hamzah Abu Samah. He will be accompanied by senior officials from other government agencies. The agenda will include presentations by the Malaysian delegation, a film and a question and answer period. Time will also be available for individual sessions with U.S. companies interested in pursuing specific Malaysian projects. For further information write: Subra Maniam, Director, Federal Industrial Development Authority of Malaysia, Transamercia Pyramid, 600 Montgomery St., San Francisco, Calif. 94111; or Eng-Che Low, Director, Federal Industrial Development Authority of Malaysia, 600 3rd Ave., New York, N.Y. 10017.

The following trade opportunities are based on reports received from the U.S. Foreign Service—Department of State by the Trade Opportunities Division, Room 2323, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1972 Census of Manufactures.

U.S. firms should be aware that the listing in Commerce America *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only traders with good reputations. However, the Department cannot be responsible for any trade relations.

WTDR indicates that a World Traders Data Report on this specific firm is available at $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDRs and request forms are available at each Commerce District Office.

The mark (●) indicates that this trade opportunity is a request for bids by a foreign government agency.

Direct Sales

Anthracite coal

1111XXX—SOUTH AFRICA—60,000 tons anthracite coal: size 8mm x 20mm: for manufacture of bituminous products. Local firm which assures that it can obtain bank guarantees for purchase of this coal, wishes to bid for third country supply contract. Requires f.o.b. nearest port quotes ASAP. Contact: Allison—Marketing Mgr., Terminex (Pty) Ltd., P.O. Box 3883, Alrode 1451. Tel: 011/664-6606.

Highway & street construction

16100 — GUATEMALA — The Bureau of Public Highways (Direccion General de Caminos) is inviting highway construction firms interested in participating in upcoming government highway projects, to present their application for inscription in register of prequalifying firms of Direccion General de Caminos (DGC) in order to qualify for future bids. Construction firms that wish to prequalify and are not already in the register of prequalifying firms must be from Inter-American Development Bank member countries. Such firms must submit applications and other pertaining documents by Aug. 5, to be registered in any or all of following specialties: A) earthmoving works, B) bridge construction, C) highway drainage structures, and D) paving works. Construction firms which regis-

tered with the DGC before 1976 must renew their registration by Aug. 5, or their registration will be automatically voided. Firms which presented their applications for prequalifying purposes within 1976 need not apply again. Application forms may be obtained in exchange for 500 sheets of letter size, 80 gram, white mimeograph paper at Secretaria Comision Precalificadora, Departamento de Especificaciones, Division Tecnica, Direccion General de Caminos, Salon No. 7, Finca "La Aurora," Zona 13, Guatemala City (Tel. 60011, Ext. 35). All documents must be presented in Spanish or translated by a sworn translator authorized by Government of Guatemala.

Heavy construction

● **16200—LIBERIA**—Bids are invited for complete construction for central water supply systems for three upcountry cities. Tender is subdivided into three lots which may be offered separately as well as completely. Division of lots corresponds to systems in individual cities as follows: Lot 1, Voinjama; Lot 2, Sanokole; Lot 3, Gbarnga. In general, lots comprise the following construction measures: erection of a river water intake treatment station with capacity of 900-1350 Cu. Mt. (234,000-350,000 gals.) daily; elevated tanks and distribution network with public taps and service. Fee for each set of tender documents is: U.S. $300 (DM 780) surface, or U.S. $330 (DM 860) air freight. Organizations involved are: Liberia Water and Sewer Corp. (LWSC), Old Lamco Yard, P.O. Box 1079, Monrovia, and Planning Group for Water Supply Systems in Liberia (PWL), GRW, Gesell Shaft for Klaranlagen and Wasserversorgung MTH Gottlieb—Daimler—Str. 12A, West Germany. Fees for each set of tender documents are to be paid to: LWSC Account No. 2975, Bank of Liberia, Monrovia or PWL Account No. 6 570628, Dresdner Bank AG, Mannheim, Germany (depending where documents are ordered). Project is in framework of German capital aid. Submission deadline Aug. 26.

Wood products

● **24910—NIGERIA**—The government is inviting tenders for pressure impregnated roof trusses for Kwara and Benue states. These are the first of 19 sites to be released. Work consists of supply, fabrication and delivery of approximately 11.40 meter span trusses. Quantity required in Kwara State is 231 (11 to 17 trusses per site for 16 sites) and in Benue State is 107 (16 to 23 trusses per site of 7 sites). Applicants should write letters to Project Consultants, Ekwueme Associates, Scann, P.O. Box 3785, Lagosvgn, Nigeria to attention of Corsby, Project Coordinator. Letters should furnish financial standing, registration with works registration board, description of equipment, plants, personnel, and previous jobs. No deadline date given.

● **24910 — NIGERIA** — Nigerian railway corporation inviting tenders for 49,000 cubic feet of building timber. Official tender documents obtainable from Controller of Stores, Nigerian Railway Corp., Ebute Metta, Nigeria for non-returnable deposit of 50 naira (1 naira=$1.60). No deadline date given.

Industrial chemicals

● **28XXXX—ZAMBIA**—2,020 metric tons of sodium isopropyl xanthate, 500 metric tons of sodium ethly xanthate, 122 metric tons of caustic soda, 360 metric tons of ammonium chloride, 180 metric tons of sodium cyanide, 400 metric tons of aluminum wulfate, 9,600 metric tons of sodium hydro sulfide, and 150 metric tons of palm kernel oil. Tender number BD/BM/017/2248. Bid deadline Aug. 27. Prices required both f.o.b. and c. & f. Dar Es Salaam. Delivery schedules and specifications contained in tender documents must be adhered to. Tenderer must furnish additional information on manufacturer, payee, prices, etc. Bids must be submitted to The Chief Buyer, Buying Department, Centralised Services Division, Nchanga Consolidated Copper Mines Ltd., P.O. Box 172, Kitwe, Zambia. Copies of tender documents will be available from Chemicals and Rubber Program, Materials Division, OBRA, BDC, Room 2104, U.S. Department of Commerce, Washington, D.C. 20230, 202-377-3174.

Plastic products

● **30797—MALTA**—5,000 "Rikotta" baskets (molds) made of non-toxic thermosetting plastic, blue in color. Dimensions: top diameter—8.0 inches; bottom diameter—5.05 inches; depth—7.25 inches. Capacity about 4kgs. Copy of specifications available from the Manager, Milk Marketing Undertaking, Hamrun, Malta or from U.S. Department of Commerce, BDC, Consumer Goods and Services Division, U.S. Department of Commerce, Washington, D.C. 20230, 202-377-2923.

Fabricated structural metal products

● **34400, 35200, 77900—ZAMBIA**—Supply of garden tools and bucket products as follows: 2 gallon bucket builders—31,000; 3 gallon watering cans with ross—42,000; flat tanged hoes—15,000; mattocks—40,000; garden rakes—34,000; sickles—37,000; wheelbarrows with iron wheel—30,000. Bid deadline July 30. Tenders must be submitted to Secretary, Republic of Zambia Central Supply and Tender Board, P.O. Box 1009, Lusaka. Samples required under invitation to bid must be forwarded to Director of Government Stores, P.O. Box 476, Lusaka. Copy of invitation to bid providing instructions to tenderer is available at U.S. Department of Commerce, Consumer Goods and Services Division, 202-377-2923.

Farm machinery

● **35230—BANGLADESH**—General Manager, Purchase Div., Bangladesh Agricultural Development Corp., Krishi Bhaban, 49-51 Dilkisha Commercial Area, Dacca-2 (cable: "Purchase Krishikaj" Dacca), requests bids for 46 different items of laboratory equipment, machinery and miscellaneous materials for a seed certification agency under cereal seed project including grain triers, bag triers, precision divider, seed blower, seed deckage sieves, seed germinators, moisture meter, fluorescent magnifier lights, circline fluorescent bulbs, drying oven, dessicating cabinets, thermometers, petri and analytical dishes, service carts (two wheels), microscope, tripod magnifiers, seales, seed sample pans, purity work board, vitascope, filter papers, bag truck (two wheels), rice miller, seed counter, power tiller, single row seeder (hand), hand cultivator, Gray's Manual of Plants, postal seale, numbering and adding machines, and portable electronic calculators in various specifications and quantities. Purchase will be financed by IDA Credit no. 410-BD. Estimated cost of total imports will be equivalent to $7.5 million. Quotation should be on cost and freight Chittagong basis. Prescribed tender form giving detailed specifications, requirements, terms and conditions available from above address for TK 18 or its dollar equivalent ($1.15), not refundable, per set.

Special industrial machinery

● **35590, 35890—INDONESIA** — Separate contracts for supply of equipment for raw water pumping station for West Kalimantan (Borneo) as follows: Bid deadline Sept. 15—Contract 4—chlorination equipment, hoist, and miscellaneous materials; Contract 5—pumps, motors and misc. equipment; Contract 6—pipes, valves and misc. materials and equipment. Bid deadline Nov. 15 for Proposal II—Supply of equipment and materials for construction of a 13,800 M3/day water production and treatment plant, and water reservoir pumping station. Financing under IBRD Loan No. 1049-IND. Costs of contract document for contract 6 (prop. I) is 25,000 rupiah (approx. $60.24), for Proposal II 30,000 rupiah (approx. $72.29). An addendum to proposal II containing raw water quality analysis, results of soils test at the treatment plant site and reproducible topographic map of the site may be obtained for 10,000 rupiah (approx. $24.10) by firms wishing to make alternative proposals. Construction facilities and installation of equipment will be by an Indonesian Civil Works contractor. Association with such a contractor is preferred for proposal I and mandatory for proposal II. Tenderer is Department of Public Works and Electric Power. Write and submit bids to: Ir. Rachmat Wiradisuria, Director General of Housing, Building, Planning and Urban Development, Directorate of Sanitary Engineering, Jalanpattimura No. 20, Fourth Floor, Kebayorah Bru, Jakarta Selatan, Indonesia.

3559585—GERMANY—Electronic production & test equip., such as component assembly machinery for PCS, component production equip. for resistors, capacitors & ICS. Medium-sized mfr. of assembly lines with integrated soldering system for printed circuit boards, wishes add sales representation of U.S. products to own program. Employs 95. Annual sales: DM 6 million. Has among its customers firms like ITT and Siemens. Has agencies throughout Germany & Europe. No special requirements as to price quotation & terms of payment. Very favorably known to Consulate General. Reply to—Herbert Streckfuss, Firma Herbert Streckfuss KG, Kruppstrasse 10, D-7514 Eggenstein-Leopoldshafen. Telex 7826566; tel 0721/70222.

3559589—FRANCE—Tannery machinery. Limited liability co. capitalized at $11,000, importer & distr. of machinery & equip. for shoe, auto & building industries & for tanneries. Employs 6 traveling salesmen covering France & other Common Market countries. Acts as excl. sales agent for Czechoslovakian, German & U.S. firms in France. Annual sales reportedly $2,500,000. Enjoys excellent credit rating. Recommended as trade partner for U.S. concerns. Excl. distribution requested. Reply to A. Huber, Mgr., Huber & Cie., Zone Industrielle, 67490 Dettwiller, France. Telex 870953, Huber; phone 88-91.41.53.

General industrial machinery

● **35600 — EGYPT** — Pumping units, switchboards, and transformers. Tender number 44/1976; bid deadline Aug. 15. Director General, Purchase and Contract General Division, Alexandria. Buyer is municipal organization in charge of Alexandria water supply. Tender estimated at $2 million.

35640—SOUTH AFRICA—Supply of axial flow suction fans, incorporating continuous centrifugal dust removal of dust from grain drying or handling plant. Private trade opportunity—no fixed deadline. Fan capacity approx. 15,000 cu. ft. per min. (cfm) against vacuum of 3 in. water gauge. All dust down to six microns must be removed. While it is intended to use such units in multiples of six, individual units of capacity higher than 5,000 cfm are also of interest. Dry separation of dust required. Cable and confirm by airmail: N. Besbier, Consultant, Besbier Driers (Pty.) Ltd., P.O. Box 43, Rosslyn, South Africa 0200. Bid request is from agricultural co-op. Cable: Box 43 Rosslyn 0200. Tel.: 011/581721. Besbier is acting as consultant to his brother's firm, which has been awarded contract by Oos Transvaal to erect grain and cereal drying plant. Although primarily interested in equipment described he would welcome contact with suppliers of or with expertise in dust removal. Besbier is also interested in agency/distributor agreements. This will apparently be first dust removal in country. Interested firms should cable P.O. Box address and confirm in writing.

Office, computing, accounting machines

● **35730—ALGERIA** — Secretariat General, S.N.T.R., 27 Rue des Trois Freres Bouadou, Birmandreis, Algiers, has issued a tender for supply of data processing equipment. Bid deadline Aug. 13. All correspondence must be in French. Specifications in metric units. Copy of specifications in French available from above address at US $120.85.

Service industry machinery

● **35890—KENYA**—Supply of two bandscreens for the intake to the raw water pumping station on the Sabaki River (approx. 40 km W. of Malindi) together with provision of services of an engineer to check reaction and commissioning of screens. Tender documents available for $61.27 deposit in Kenyan currency from E. A. Ngunya, Director of Water Development, Ministry of Water Development, P.O. Box 30521, Nairobi. Prospective bidders must satisfy Director of their firm's experience. Deposits will be refunded upon receipt of a valid and complete tender or if bidder is found unqualified. Prices c.i.f. Mombasa. Make ref. to: Contract No. MCS/4—Supply and delivery of bandscreens.

● **35890—SINGAPORE**—Supply and erection of sewage treatment plant and related equipment, including switchgear and transformers. No closing date. Write to: Wang Nan Chee, Environmental Engineering Division, Ministry of Environment, Princess House, Alexandra Road, Singapore 3. (Cable: Mineviron Singapore.) Ref.: Ten (Env) 07/LF/G5. Contract to include switchgear, starter board (both 6.6 KV), 400 Volt switchgear, 3.3 KV distribution and starter board and 6.6 to 3.3 KV transformers, and 6.6 KV to 400 volt transformers. Also air and gas compressors. Sewage equipment is delineated below by contract number. This proposed Ulu Pandan Sewage Treatment works is valued at $8 to $12 million. Contract No. Up 111/1—Main civil works; Contract No. Up 111/1A—Screens and grit channel machinery; Contract No. Up 111/1B—Pumping machinery; Contract No. Up 111/iC — Switchgear and cabling; Contract No. Up 111/Id—Sludge pressing plant; Sub-contract No. Up 111/1F to Main Civil Works—Sludge mixing and heating equipment; Sub-contract Up 111/iG to Main Civil Works—Gasholder and gas burner; Sub-contract up 111/iH to Main Civil Works—Scrapers for primary sedimentation tanks; Sub-contract up 111/1J to Main Civil Works—Metering; Contract Up 111/1K-SAS Consolidation equipment; Contract up 111/3—New effluent outfall; Contract up 111/5—Administration building extension.

Electric transmission, distribution equipment

● **36100—SYRIA** — The State is seeking bidders for supply of production line to assemble and manufacture 20/0.4 kv. electrical transformers at rate of 15,000 units per year based on one shift. No stated value on project. Officers should state specifications of equipment, method of erection, quantities, power consumption, required labor and specifications of transformers to be produced. Include catalogs, drawings and price details. Offer in three copies giving both f.o.b. and c.&f. prices, and shortest delivery period; should be valid for four months. Performance bond required ten percent contract price by bank guarantee (L/C presumably acceptable). Delay penalty one Syrian pound per thousand daily. Interested firms should submit offers no later than Sept. 18, to Electric Motors Mfg. Co., P.O. Box 190, Latakia. Tender documents available at same address free of charge.

Important Notice

Most member countries of the League of Arab States employ a secondary boycott against foreign firms which undertake certain specific types of business relationships with the State of Israel. The Commerce Department will not disseminate or make available for inspection any tenders or trade opportunity documents which contain conditions intended to support such boycotts, or which are based on documents known to contain such provisions. Trade or investment opportunities published herein are not presently known to be subject to such conditions. However, it is possible that U.S. firms responding to opportunities from Arab countries may be asked at some stage of a transaction to participate in an Arab boycott-related restrictive trade practice as defined in the Department's Export Administration Regulations (15 CFR, Part 369 et. seq.).

Firms are reminded that pursuant to Section 3(5) of the Export Administration Act of 1969, as amended, it is the policy of the United States (a) to oppose restrictive trade practices or boycotts fostered or imposed by foreign countries against other countries friendly to the United States, and (b) to encourage and request U.S. concerns engaged in the export of articles, materials, supplies, or information to refuse to take any action, including the furnishing of information or the signing of agreements, which has the effect of furthering or supporting such restrictive trade practices or boycotts. Accordingly, U.S. concerns receiving such requests to participate in a restrictive trade practice or boycott are encouraged and requested to refuse to comply with them.

Firms are further reminded that U.S. concerns receiving requests to participate in a restrictive trade practice or boycott must report such request to the Department of Commerce in accordance with Section 369.4 of the above-cited regulations.

Household appliances

● **36340—ZAMBIA**—Electric fans, oscillating, 10 to 14-inch sizes, 7,000 units; 2,000 heaters, 1,000 w.; 1,000 fan heaters, 1,000-2,000 w.; 2,000 irons, 250 v.; 1,000 electric kettles, 3-pint size, 230 v. Also 2,000 flashlights, 2 cell; 400,000 flashlight batteries, 1.5 v. Tender No. MF/GS/421. Bid deadline July 30. Submit offers to Secretary, Republic of Zambia, Central Supply and Tender Board, P.O. Box 1009, Lusaka. Specifications available at Consumer Goods & Services Division, U.S. Department of Commerce, Washington, D.C.; 202-377-2923.

Communications equipment

● **36610—KENYA**—Pan-Africa Telecommunications Network, East Africa Section, c/o The Crown Agents (Dept. E2), London, SWIP, 3JD, England, has issued tender no. E2E/EAPT WB 3/32810 for supply of a 960-channel microwave telecommunications network from Moyale, on the Kenya/Ethiopia border to Tunduma, on the Tanzania/Zambia border. Documents will be issued in July, but orders for documents, accompanied by fee of US $100 or 50 pounds sterling, may be submitted now. Copy of specifications available from above address.

● **36610—AUSTRALIA** — Chief Manager, Supply, Telecom Australia, 3rd Floor, 199 William St., Melbourne, Vic., Australia 3000, has issued tender no. C8600 for supply, delivery and installation of an S.P.C. telex switching system for use in Australian public telex network. Bid deadline Oct. 28. Estimated value $7 million. Copy of specifications available from Australian Consulate General, 636 5th Ave., New York.

● **36610—BURMA** — Managing Director, Electric Power Corp., 197-199 Lower Kemmendine Rd., Rangoon, has issued tender no. 5(T)PTP-EPC/ADB 161 Burma/76 for supply and installation of 9 sets two-channel power line carrier telephone equipment and 8 sets one-channel powerline carrier telephone equipment, plus accessories, coupling capacitors, wire traps, filters, switchboards, selector relays, voltage regulators, battery chargers, coaxial cable, testing instruments and frequency counters. Bid deadline Sept. 6. Copy of specifications available from U.S. Embassy, Rangoon, for U.S. $15 per set. When ordering, cite "T-0167."

● **36620 — BURMA** — Deputy Director (Stores), Central Stores Department, Electric Power Corp., Rose Bank Road, Ahlone, Rangoon, has issued tender no.

1(T)EL-EPC(T)/76-77 for supply of two sets of 2 channel VHF/FM radio telephones with power output of 50 to 60 watts, and accessories. Bid deadline is Aug. 4. Copy of specifications available from U.S. Embassy, Rangoon. When requesting copies, cite "T-0169."

• **36620—INDIA**—Director General of Posts and Telegraphs (MMD) Section, Parliament St., New Delhi 110001, has issued tender no. 12-141/76 MMD for supply of two sets of automatic receiving equipment for radio telephone alarm signals. Bid deadline Aug. 27. Copy of specifications available from Assistant Director General (Imports), Room 514 P&T Directorate, New Delhi, upon payment of 20 rupees (US $2.74), in form of crossed Indian postal money order, cashable at Parliament Street P.O.

• **36610—IRELAND** — Engineer-in-Chief, Department of Posts & Telegraphs, Contracts Section (Room 610), Telephone House, Marlboro St., Dublin 1, has issued tender no. C/610/8/24 for supply and installation of automatic telephone equipment at Dooradoyle Telephone Exchange, Limerick, in accord with Specification No. SS 762. Bid deadline Aug. 24. Copy of specifications available from above address.

• **36610—SINGAPORE** — Telecommunications Authority of Singapore, Radio and Transmission Dept., 4th Floor, Plaza Singapura, 68 Orchard Road, Singapore 9, has issued tender no. PT/75/76 (Y) for supply of 65 units of 1000/20 and 500/20 strappable in-band tone ringers, 30 single tone frequency singalling units, and 24 signalling repeaters. Bid deadline Aug. 6. Copy of specifications available from above address upon receipt of bank draft of 500 Singapore dollars (US $203.25) in favor of Telecommunications Authority of Singapore.

Electrical machinery, equipment, supplies

• **36930—PAKISTAN**—Col. (Dr.) Masood Akram, Department of Cardiology, Military Hospital, Rawalpindi Cantt., Pakistan has issued a request for quotations for supply of following equipment for use in coronary intensive care ward; electrotherapeutic and X-ray equipment, photographic equipment, TV monitor and control assemblies, electronic stethoscope, endless loop-channel tape recorder, video tape recorder, air-shield rescue breathing equipment, special intensive care beds. Offers should include cost of training for technicians to operate equipment. Offers should be sent to Col. Akram as soon as possible, since he has been in touch with suppliers in other countries.

Instruments for measurement, analysis and control

3823064 — SWITZERLAND — Electronic pressure transmitters for process control applications (with analog and/or digital output signals). Well-estab. intl. concern with annual sales over $100 million. Specializes in mfr. & rep./selling highly diversified line of advanced process control instrumentation. Capable handling any application engineering, as well as after-sales servicing problems. Sound financial standing. Reply to—M. Laager, Mgr., Bestobell-Mobrey AG, Birchlenstrasse 46, 8600 Duebendorf. Cable: Mobrevag; tel 01/821 55 55; telex 56 769 Mobag CH.

• **38290—MALTA**—Water Works Department, Government of Malta, Beltissebh, Malta, has issued tender No. CFA/ECO/120/1004 for supply of one water level recorder for gauging boreholes and one water level recorder for pumping tests. Copy of specifications available from above address or from Embassy of Malta, 2017 Connecticut Ave., NW., Washington, D.C.

Surgical, medical, dental instruments

• **38420 — ECUADOR** — Lic. Washington Vasconez D., Secretario, Comite de Licitaciones y Concursos de Oferias, Instituto Ecuatoriano de Seguridad Social, Avda. 10 de Agosto y Bogota, Quito, has issued tender no. 2-76-IESS for supply of equipment for intensive care unit of its largest hospital. Bid deadline Aug. 16. Companies must have representatives in Ecuador in order to sign contract with purchaser. Copy of specifications available from address above for US $40, nonrefundable.

Photographic equipment

3861941—INDONESIA—X-ray film. Est. value $50,000/yr. WTDR prep. Limited liability co., estab. 1955. Engaged as importer, agent & distr. of pharmaceuticals, medical instruments, X-ray film & sanitary wares. Small, has 175 employees & 4 salesmen. Sell throughout Indonesia. Payment to be funded by L/C. Requests catalogs, c.i.f. Jakarta price quotations for above equip. Requests responses by cable ASAP. Cable—Sastra Munato, Dir., P. T. Mendjangan, Jalan Hanura Raya 8, Jakarta Barat. Cable PTMENDJANGAN Jakarta; tel. 592138 & 26456.

Scrap & waste materials

5093XXX—GREECE—Scrap and waste materials. Particularly interested in steel scrap. First year imports will be 100,000 tons, second year 150,000 tons and third year 200,000 tons. Newly established steel mill starting operation Oct. 1967. Credit directory lists capital of drs 108 million. Interested in direct import of steel scrap to cover own needs. WTDR on request. Reply to: George Anastassopoulos, Financial Consultant, Metallourgiki Halyps Inc., 40 Anast Zinni, Athens 404. "Tel" 9240281; Telex: 5121 MET.

Antique, secondhand stores

5931XXX — EGYPT — Supply of large quantities of used clothing, first & second grade. Requests price list c.i.f. Alexandria & description of merchandise with catalogs if available. Write to—Abdel Hamid Awad, Sun Nile Corp., 70 A. Helwan St., Monira, Cairo. Cable: Salsabil, Cairo; tel: 21939.

5931XXX—EGYPT — Supply of the following: 100,000 pairs used sportswear pants for men, medium sizes; est. cost $250,000, and 100,000 pairs used jeans, medium sizes, est. cost $500,000. Price quotations requested f.o.b. & c.i.f. Alexandria. Reply to—Sayed El-Nouby, Mgr., ABC Stores, 115 El-Attarine St., Alexandria. Tel: 28422; telex: Palot 4027.

5931XXX—EGYPT—Off-season & out-of-fashion new garments in bulk. Prepared purchase unlimited quantities and request prices c.i.f. Port Said. Write or cable — Abdel Messih Hebeish, Am. Hebeish & Son, 9 El Matba El Ahleia, Boulak, Cairo. Cable: Hebeishco, Cairo; tel: 866703; telex: 2329 IF UN Attn: A. Hebeish.

Greek Ministry Invites Bids On Technical School Needs

Greece's Ministry of National Education & Religion invites firms to bid for the supply of equipment for five Higher Technical Education Centers (HTEC) in the towns of Athens, Thessaloniki, Larissa, Patras and Iraklion (Crete).

Equipment includes: furnaces, incubators, scales, calculators, centrifuges, projection screens, microscopes, tape recorders, photocopying machines, welders, electric sieve shakers, grinder/mixers, forage choppers, grain cleaners, hay conditioners, row crop thinners, forage blowers, portable livestock scales, PH meters, vacuum pumps, color diferring meters, shear presses, water stills, colony counters, mold counting chambers, hot plate oscillatories, water baths, etc. Project partially financed with IBRD funds.

Bid documents must be obtained from Ministry of National Education & Religion, General Directorate of Vocational Education, HTEC Construction & Equipping Service, 15 Metropoleos St., Athens. Documents cost 1,000 Drachmas per set, plus 200 Drachmas for postage (total about $33). Bid deadline is Aug. 20.

Representations

Foreign private firms are interested in agency agreements and/or distributorships for these products.

Household furniture

2514437—SWITZERLAND — Metal bed frames. Est. annual potential $20,000. Market territory Switzerland & adjacent countries. Newly estab. proprietorship. Schaefer, former sales dir. of important Swiss mfg. of plastic & metal builders' & furniture hardware, has excellent contacts. Labor force 3. Recommended trade contact according to bankers—Solothurnische Kantonalbank, Amthausquai 11, Ch-4600 Olten. Reply to—Mr. Thomas Schaefer, Saelistrasse 100, Ch-4600 Olten. Tel 062/22 43 77.

Concrete, gypsum, plaster products

3272225, 3272241—CANADA — Cement silos—cement gates, aggregate gates. Mfr., distr. of equip. & supplies for concrete div. of construction industry. Sell to companies in Alberta & British Columbia. Considered responsible for regular business commitments. Excl. agency. Reply to—J. Richardson, Pres., Century Pacific Industries Ltd., 220 E. 1st Ave., Vancouver, B.C. V7L 1B3. Tel 604-879-3581.

Abrasive, asbestos, nonmetallic mineral products

3292735—PAKISTAN — Pipe covering (casing). Interested in representing U.S. mfrs. Quote terms & conditions directly for negotiating rep. or agency arrangements for Pakistan on excl. or non-excl. basis. Combine claims ownership of food processing units & substantial textile mfg. facilities in N.W.F.P. Serves as contract suppliers to N.W.F.P. govt. industry dept. Other operations incl. exports of textiles & import of general machinery & sanitary ware. Has wide conections in business & govt. circles. Has good finan-

cial standing. Reply to—Salim Safiullah Khan, Dir., Saif International Combine Ltd., 48/1 Teh Mall, Peshawar Cantt. Cable Saifinco; tel 2631.

Steel mill products

33167XX — TURKEY — 1,000 tons cold rolled steel-pickled st 37-2din 17,100-oiled 2.0 x 960 mm in coils weight 7-10 tons/roll, internal dia. 24 in.; dimension tolerances din 1016 edges are cut. 2,000 tons din 1623 st 12.03 cold rolled steel 1.25 x 1258 mm & 1.25 x 1030 mm (1,000 tons ea.). 1,400 tons cold rolled steel. 0.40 x 1000 x 2000 mm, 0.50 x 1000x2000 m, 0.90 x 1000/2000 mm, 1.00 x 1000 x 2000 mm, 1.20/1000 x 2000 mm, 1.50 x 1000 x 2000 mm, 2.00 x 1000 x 2000 mm (200 tons ea.), dimension tolerances din 1623 thickness plus dimension din 1541—can be in coils. Above specs are purchaser's partial 1976 requirements; delivery requested second half 1976. Quantities can be increased by 25%. Preferable payment terms cash/goods with letter of guarantee by client's bank for Turkish lira deposit. 2% commission requested. Purchaser is largest automobile & appliance mfr. in Turkey. Further steel requirements of approx. 3,800 tons various types cold rolled sheets anticipated for 1976 & subsequently on continuous basis. Give quotes on f.o.b. basis. Reply to—Emil G. Khoury, Mets-Interad (UK) Ltd., Istiklal Caddesi 184/6 Gala Han, Beyoglu, Istanbul. Cable Penlit-Istanbul, tel 443503 & 492334; telex 22725 Bot Tr Attn Mets.

Cutlery, hand tools, general hardware

34231XX — SWEDEN — Double flexible socket wrenches; open end & open end box wrenches. Small well estab. firm, has met business obligations satisfactorily. Financially sound & recommended trade contact. Reply to—Lars Nygren, Firma Cany, Box 117, S-640 31 Mellosa. Tel. 0157/603 20.

3423298 — FRANCE — Hand pruning shears & other tools for wine-growers. Specializes in wholesale & retail trade of materials & equip. used in wine grape producers & wine bottlers & mfrs. Has 5 traveling salesmen calling on wine farmers & wine growers cooperatives in France, Germany & Swit. Founded 1971, but recently reorganized under new management which wishes boost activity. Local banking sources give it very good credit rating. Recommended as trade partner for U.S. concerns. Reply to—Dominique Brendle, Mgr., Vitar, 109 Rue de Strasbourg, 68300 St. Louis, France. Telex Brendco 881508; tel. 89-670059.

Fabricated metal products

34946XX — SWEDEN — Low pressure metal hose, fittings, & assemblies for hydraulic systems. Medium & high pressure hose, fittings, & assemblies: reusable & permanent. Est. value after introduction: $500,000. Large company has share capital skr. 300,000 and approx. annual turnover 24 million. Firm financially sound & meets business obligations promptly. Highly recommended trade contact. Eriksson plans visit Wescon Exhibition in L.A., Sept. 14-17. Hopes to meet with U.S. suppliers of above at that time. Reply ASAP to—Mr. Lennart F. Eriksson, Allhabo, Box 49044, S-100 28 Stockholm 49. Cable Allhabo; telex 19015; tel 08/22 46 00.

Construction, mining, materials handling machinery, equipment

3534031—BELGIUM—Automobile lifts—service station & garage types. Excl. rep. Estab. 1922, imports auto parts & ind. equip. from all over the world. Mfrs. batteries & pit-jacks, exports batteries, submersible pumps & pit-jacks to Europe, Middle East & Africa. Has 14 sales offices in Belgium & has product range of 80,000 different items, with storage area of 129,170 sq. ft. Owned by and is European distr. of automotive & industrial parts of A.P.S. Inc., Houston, Tex. & represents many other U.S. companies. Employs 900. Has excellent business reputation. Reply ASAP to—Jean-Jacques Matthieu de Wynendaele, Mng. Dir., Ets Daniel Doyen S.A., Chaussee de Mons 913, 1070 Brussels. Tel. 523.80.60; telex 226.23.

Special industrial machinery

3559585—KOREA — Machinery and/or equip. to mfr. semiconductors & fabrication of wafers for use in electronic industry, which is deemed essential & must be imported for implementation of recently announced govt. electronic industry dev. plan (1976-81). Plan calls for local production of 31 electronic components or parts incl. wafers, processed wafers, lead frames, gold filament, high density ic's, imitation crystal, crystal oscillators, liquid crystal indicators, special dry cells, small computers, switches/connectors, high-density printed circuit boards, key boards, & color tv braun tube glass. Firm able promote sales approx. $20 million worth of equip. if competent suppliers authorize in time w/catalogs, promotional literature, price quotations, delivery terms, & proposals for agency agreement. Registered offer agent, official status required in Korea to represent foreign suppliers & submit price quotations in own name. Well known to local business community, promoting sales of wide range of scientific & lab instruments. WTDR 2/75. Reply ASAP by cable to—P. H. Ryu, Pres., Asia Science & Co., CPO Box 1250, Seoul 100. Cable Asiascience, Seoul; tel 76-2761/5; telex Shinhan K28205.

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Firms are further reminded that U.S. concerns receiving requests to participate in a restrictive trade practice or boycott must report such receipt to the Department of Commerce in accordance with Section 369.4 of the above-cited regulations.

Office, computing, acct. machines

357XXXX—UNITED ARAB EMIRATES —Well connected, established local firm has expressed interest in possibility of representing U.S. suppliers of computers and related equipment. U.S. companies interested should directly contact Mohammed Abu'l-Howl or Dr. Juma Abu'l-Howl, Gulf and World Traders, P.O. Box 1155, Dubai, UAE. Telephone: 61614-5, telex: 6060 JADBA DB. For additional information contact Andras F. Behr, CAGNE/BIC, U.S. Department of Commerce, Washington, D.C. 20230, 202-377-4441.

Electrical industrial apparatus

3624152—PAKISTAN — Cinema carbon rods, 70 amp. for film projection. Quantity 100,000 pairs. Value approx. $20,000. Medium size importer & sales indent agent of dyestuffs for textile industry, chemicals of all sorts, insecticides & motorcycle parts & accessories. Imports from China, Japan, U.K., W. Germany, & U.S. Wishes purchase for resale to others. Also interested in long-term agency arrangements. Marketing territory all Pakistan. Requests c&f Karachi quotations against L/C. Employs 13 incl. 3 in sales. Reply to—Dilawar Baig, Proprietor, Zahir Bros., 9 Hoorbai Mansion, Admajee Dawood Rd., Karachi. Cable Acidorange Karachi; tel 235429 & 229770. Co. ref. 786/76/540-1B. Dir. sale for resale & agency.

Household appliances

3634378 — GERMANY — Electric coffee grinders, household. Estab. 1915, employs 20, sells through 6 traveling sales agents; sales area Northrhine-Westphalia, Annual sales DM 15 million. Has warehousing facilities. Reply by fastest means to—Heinz Mandelartz, Owner, Heinz Hoffmeister KG, Duesseldorfer Landstr. 57, 4100 Duisburg-Buchholz. Tel 0203-771341-2; tx 0855563.

Communications equipment

3662321—SOUTH AFRICA — Signalling equip. specifically for mines. Subsidiary of Delta Metal Electric (SA), U.K. based firm with diverse local interests, mainly in mfg. & supply of mining equip. Would therefore appear to be well-connected in field. Should suitable product be located, opportunity could prove substantial. Financial ref—Standard Bank, Commissioner St., Johannesburg. Write airmail—R. J. Linnel, Gen. Mgr., Delta Martco (Pty) Ltd., P.O. Box 469, Johannesburg 2000. Tel. (011)24-9124; telex 8-6551SA.

36626XX—SWEDEN — Consumer electronic equip.; other electronic systems. Has sold electronic alarm systems &

components since 1973 & is well estab. in field. Financially sound & has met payments satisfactorily. Since firm recently estab., only moderate credit recommended. Reply to—Gunnar Bengtsson, AB Automatvakt Nabam, Kulladalsgatan 24, S-214 64 Malmo. Tel 040/96/32 00.

3662681 — GERMANY — Telephone answering devices. Newly estab. firm (4/76) as wholesaler of specialized office machinery. Subsidiary of Bog, Frankfurt, prominent local business machine retailer, located at same address & enjoys good reputation. Reply to—Dr. Wolfgang Reichelt, Mgr., Orbis Bueromaschinen Vertriebs-GMbH, Heddernheimer Landstr. 144, 6000 Frankfurt 50. Tel 0611-574066.

3662624—SWEDEN — Ultrasonic soldering handtools. Small, estab. 1976, specializes in ultrasonic equip. 5% of company's sales exported to Norway & Denmark. According to local credit sources, considered capable & financially sound. Reply to—Ralf Elgqvist, Mgr., Goteborgs Ultrajud, Box 24013 S-400 22 Goteborg. Tel. 031/20 95 32.

3662697 — GERMANY — Electronically-operated security lock systems. Quote f.o.b. U.S. harbor. Est. 1974, employs 250. Financial ref. Deutsche Bank AG, Commerzbank AG, both located in 562 Velbert. Reply by fastest means to—Herr Hans Girod, Mgr., Jul. Niederdrenk, Postfach, 5620 Velbert-Toenisheide. Tel 02 120-6061; Tx 08516886.

Electrical machinery, equip., supplies

3699267—UNITED KINGDOM—Electric fly killers. Interest has been expressed in obtaining agencies for above for U.K. or greater geographical distribution. Reply to—J. W. Bath, Henry Simon Ltd., Special Products Div., P.O. Box 31, Stockport SK3 ORT. Tel 061-428-3600.

Scrap & waste materials

5093XXX—GREECE—Waste paper. Andreadis, commercial representative & member Athens Association of Commercial Agents, requires waste paper from colored tabulated cards, white news blanks, & hard white savings. Above paper will be used from local industry as raw material for manufacture of self-adhesive tapes. Needs 5,000 tons annually. Andreadis will act as exclusive agent. WTDR on request. Reply to—George Andreadis, Owner-Mgr., George A. Andreadis, 17 Ydras St., Amaroussion Attikis. Tel. 8025086.

5093XXX—ITALY — Waste paper, soft white shavings, grade 28. Est. annual potential sales $350,000. Waste paper; of corrugated cardboard ksk. Est. annual potential sales $1,200,000. Bolzoni, established 1973, employs 17, is local importer of cellulose and waste paper. Sales network employs 5 salesmen and 3 representatives. Share capital is 500 million lire. Bank reports give firm good credit rating. Bolzoni is reportedly well managed. Deserves credit. Reply to: Mauro Bolzoni, Gen. Mgr., Bolzoni S.P.A., Via Vitt. Pisani 8/A, 20124 Milan. Cable: Bolzpaper; telex: 31304; phone 02/638541.

Business services

7392XXX, 7813XXX—AUSTRALIA—Audiovisual material for courses in management communication; i.e., top level management communication. Subject firm seeking diversifications. Reply to: Malcolm Illingworth, Dir., Illingworth Imports Pty. Ltd., 24A Killarney St., Mosman, N.S.W. 2088. Tel. 969 3973. Exclusive agent/distr.

Future Construction Abroad

ALGERIA—Silo construction. Two additional lots to project reported June 7, pg. 35. Construction of 41 different sites of silos totaling 3,000,000 metric tons capacity: lot A) study of placement of silos on sites and lot B) coordination, control and supervision of mechanical, electrical and heavy construction equipment. Deadline Aug. 31. All specs metric. Correspondence and offer in French required. Interested firms should respond direct to: SN SEMPAC, 6 Blvd. Zirout Youcef, Algiers. Cable: Dc SEMPAC ALGER, Telex: 52923 and 52907. For additional information, contact Andras F. Behr, CAGNE/BIC, U.S. Department of Commerce, Washington, D.C. 20230, 202-377-4441.

ALGERIA—State is seeking bidders for construction of two product-in-hand **woodworking plants.** Capacity of first plant to be 1,000,000 sq. meters per year. French tender documents cost DA 300 (US $72.51) and may be obtained from address below. Deadline Sept. 1. Offer should remain valid 90 days past deadline. All specs metric, correspondence and offer in French required. Submit offers via registered mail to: Societe Nationale des Industries des Lieges et du Bois, 202 Rue Hassiba Ben Bouali, Algiers. Cable: LIEBOIS ALGER, Telex: 52726, Phone: 66-20-14/15. Interested firms also requested to contact Andras F. Behr, address above.

ALGERIA—Bidders are sought for construction of one product-in-hand **industrial complex** comprising various buildings for manufacture of a variety of light and heavy prefabricated articles. Deadline July 30. Tender documents available from Monsieur le Directeur General de la SOTRAM PB (Societe de Travaux et de Prefabrication de la Wilaya de M'Sila), Rue Abdelkader Sahnouni, M'Sila, Algeria. Offers should be sent to same address. Best international references regarding past experience with similar undertakings and quality of manufacturing equipment will be given special consideration. All specs metric, correspondence and offer in French required. Copy of French newspaper announcement available in U.S. Department of Commerce, Rm. 3015, Washington, D.C. 20230. Call Andras F. Behr, 202-377-4441.

ALGERIA—State Construction Materials Corporation is seeking firms interested in construction of three product-in-hand **plants for production of ceramic tiles,** to be located at Ghazaouet and El Attaf (western Algeria), and Bechar in eastern Algeria. Each is to have a yearly capacity of 1,000,000 square meters of tile. Bid deadline Sept. 10. For further information contact: Pete Zantal, CAGNE/BIC, U.S. Department of Commerce, Wash., D.C. 20230, 202-377-4441.

ALGERIA—State Feeds Monopoly is seeking firms interested in construction of **eight turnkey incubators for hatching of breeder eggs.** Six are to have a capacity of 400,000 eggs per week and remaining two of 900,000 per week. Tender documents, in French, available for 100 DA ($24.20) from: Direction des Etudes et Realisations, ONAB, 26 Blvd. Zirout Youcef, Algiers; Cable-ONAB ALGER; Telex—52913. Closing date for the bids is Sept. 15. All correspondence to be in French and all specifications metric. Please send copies of correspondence to: Pete Zantal, address above.

EGYPT—General Organization for Industrialization is seeking contractors to bid on design, supply and supervision of installation, startup and takeover testing of **spinning mill** at Menia el Kamh. Project financed by Egyptian Government. Offers should be submitted by Sept. 6 to: General Organization for Industrialization, 6 Khalil Agha St., Garden City, Cairo. Conditions and specifications available from Purchasing Department at above address against payment of 100 pounds sterling, including postal charges. Interested firms also requested to inform Andras F. Behr, address above. OPIC.

GREECE—Contractors interested in construction of approximately **$30 million Patras-Pyrgos-Olympia Road** can apply for prequalification forms from H. Sabetai, Ministry of Public Works, General Directorate of Public Works, Highway Department (C3) Section B, 182 Harilaou Trikoupi St., Athens, submitting 3 copies of articles of incorporation, financial statements, and summaries of construction experience. Completed prequalification forms should be submitted by Aug. 31. Financed by World Bank, project will be tendered in 4 separate contracts: (1) Roitica-Lappa, about 29 kilometers, estimated at 305 million drachmas; (2) Lappa-Pinios River, 29.2 km., estimated at 310 million drachmas; Pinios River-Pyrgos Entrance, 25.8 km., estimated at 357 million drachmas; (4) Pyrgos Exit-Ancient Olympia Road, 14.7 km., estimated at 105 million drachmas. OPIC.

IRAQ—State Company for Animal Production is seeking qualified companies to bid on tender no. 1 for supply and installation of **15 prefabricated cold storage units** (1972 SIC 3585312), 50 tons capacity each. Bidding documents and specifications available from Directorate, State Company for Animal Production, Karradah Sharkia, Irkaitah, P.O. Box 10090 Alwiyah, Baghdad. Offers should be sent to same address no later than July 31. For aditional information contact Andras F. Behr, address above.

SYRIA—Ministry of Agriculture and Agrarian Reform is seeking bidders for **supply and installation of complete maintenance and repair stations for tractors, agricultural machinery and automobiles, including 90 mobile workshops for field service.** SIC code 35231, no stated value for project. Offers should include supply, installation, erection, testing, training, along with detailed specs and prices of proposed items. Deadline Aug. 2. Offers should remain valid for 50 days past deadline. Bid and final bonds are LS 800,000 and five percent of contract price. Further details available against payment of LS 100 (US $25.64) from Mechanical Department, Directorate of Rural Engineering, Ministry of Agriculture and Agrarian Reform, Saadalah Jabri Square, Damascus. Interested firms also requested to inform Andras F. Behr, address above.

GERMANY—West Berlin's largest electrical concern, Siemens AG, is planning to construct **manufacturing facility in Berlin to produce new Siemens electronic "Teletype 1000" teletype machine.** Planned to have facility built and ready

for on-line full operation by late 1977. Exact specifications not yet known. Project director estimates that total cost approx. $19.2 million. Facility will require wide range of items including heating and ventilation systems, flooring and insulation materials. Interested U.S. bidders and suppliers should contact project director preferably by telex as soon as feasible: Ing.-grad. Horst Packmohr, Projektleiter, Siemens AG, Datentechnik, Bereich Berlin, Wernerwerkdamm 15-16, D-1000 Berlin 13. Tel: (030) 386-75-57. Telex: D-18-29-24.

IRAN—Ministry of Social Welfare is seeking firms interested in supplying **complete equipment, on package basis, of 500 and 150-bed hospitals.** Bidders should be able to guarantee local servicing of equipment. Interested firms contact Ministry directly by submitting written declaration of interest by July 20, to contain technical brochures and resume of previous experience. Send information to: Dr. S. Adjudani, Medical Director, Ministry of Social Welfare, 80 North Aban Ave., Tehran. Please send copy of correspondence to Pete Zantal, address above. OPIC.

Visiting Buyers & Officials

NEW ZEALAND—J. P. Sheehan, General Manager, J. P. Sheehan and Associates, P.O. Box 31-034, Milford, Auckland 9, is visiting Los Angeles, New York, and Providence this month to meet American firms supplying **jewelry components, souvenirs and gift items manufactured by the centrifugal casting process.** He also wants to contact suppliers and manufacturers of **jewellers findings, namely bolt rings, ear clips, ear wires, lump rings, and clasps and chains for necklaces and pendants.** Sheehan will attend the Jewelry Trade Fair in New York, July 26-27. He may be contacted directly or through Bill Corfitzen, Room 2322, U.S. Department of Commerce, Washington, D.C. 20230, 202-377-2068.

HONG KONG—W. H. Choi, Managing Director, Oriental Machinery Ltd., Room 404, Chinese General Chamber of Commerce Bldg., 24 Connaught Rd., Hong Kong, will visit Los Angeles, July 19-22; San Francisco, July 23-24; Chicago, July 25-28; Washington, D.C., July 29-30; and New York July 31-Aug. 3 to locate American suppliers of **stainless steel sheets and strips, alloy steel, steel wire rods and portable electric tools and handtools.** This medium-size firm, established in 1974, employs 30, and acts as agent for several lines of foreign machine tools. Choi is well known in Hong Kong business circles. He may be contacted directly or through Bill Corfitzen, address above.

SWITZERLAND — Peter Vogel, ARDO International Marketing, Route d'Oron 2, Case postale, 1010 Lausanne; telex 26288; cable: Ardola, is interested in becoming a distributor for **medical supplies, disposables, etc.** He is not particularly interested in pharmaceuticals or large bulky items such as hospital beds. Vogel will be in the U.S. until July 9. Until then, he may be contacted through Terry Rettig, address above. After that time, he may be contacted directly or through Rettig.

AUSTRALIA—Ronald E. Owen, Director, Anthology Hi-Fi, 118 Willaughby Rd., Crows Nest, N.S.W. 2065, is interested in importing **Hi-Fi equipment, records, and accessories.** Owen will be in San Francisco July 5-16 and Chicago Aug. 2-13. Interested firms should contact Paulette Wolfson, U.S. Department of Commerce, Room 2322, Washington, D.C. 20230, 202-377-3265.

SWEDEN—Bengi Klingehed of Klingbeko AB, Klackvagen 56, S-852 54 Sundsvall, Sweden, will be in the U.S. beginning mid-July seeking agency agreements with U.S. suppliers of **T-shirts and sweatshirts.** Firm is agent and distributor of sports clothes. While in the U.S. Klingehed's mailing address will be, July 15-20: c/o Edwin Gabriebson, 500 West 32nd St., Minneapolis, Minn. 55408. July 23-30: Hotel Waldorf-Astoria, New York, N.Y. For additional information contact Paulette Wolfson, address above.

Taiwan Furniture Makers' Trade Mission Visits U.S.

The China External Trade Development Council and the Taiwan Woodworking Manufacturers' Association are sponsoring a trade mission to the United States June 24-July 29. Thirteen businessmen comprise the group.

Potential U.S. collaborators are sought by some of the mission members to improve production facilities and to establish final finishing and warehousing centers in the United States. Some are interested in joint venture and licensing arrangements with U.S. firms for manufacturing advanced finishing materials such as plastic laminates. Sources of supply of sophisticated furniture making machinery, including lathes, carving machines and moulders also are of interest.

The mission's July itinerary is as follows: July 6, Greensboro/High Point, N.C.; 9, Atlanta; 11, Dallas; 13, Los Angeles; 16, San Francisco; 24, Portland; 26, Vancouver; 28, Los Angeles; 29, Honolulu. The mission schedule calls for visiting furniture shows in New York (June), High Point and Dallas and participating in the furniture show in San Francisco.

Inquiries may be directed to the mission c/o Far East Trade Service, Inc., 350 South Figueroa St., Los Angeles, Calif. 90071; telephone, 213-628-8761. P-76512.

German Firm Seeks Partner

Westdeutsche Waagenfabrik (WESTA), a German manufacturer of household and bathroom scales, is seeking a U.S. partner engaged in manufacture of small electric or non-electric household appliances or household items, who would be interested in selling the German firm's scales in the United States under its trade name, WESTA, or under own brand name. Also manufactures private label scales for other distributors in Germany. In return would sell U.S. partner's products in Germany under its own trade name. Has two modern factories, making bathroom and kitchen scales. Contact Wilfred Hildebrandt, Mgr., Westdeutsche Waagenfabrik, Freudewald & Schmitt, P.O. Box 210760, D-5600 Wuppertal 21-Ronsdorf.

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Indianapolis, 46204, 357 U.S. Courthouse & Federal Office Bldg., 46 E. Ohio St. (317) 269-6214.

Los Angeles, 90049, Room 800, 11777 San Vicente Blvd. (213)824-7591

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Miami, 33130, Rm. 821, City National Bank Bldg., 25 W. Flagler St. (305) 350-5267.

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Minneapolis, 55401, 218 Federal Bldg., 110 S. Fourth St. (612) 725-2133.

New Orleans, 70130, Room 432, International Trade Mart, 2 Canal St. (504) 589-6546.

New York, 10007, 37th Floor, Federal Office Bldg., 26 Federal Plaza, Foley Sq. (212) 264-0634.

Newark, N.J., 07102, Gateway Bldg. (4th floor) Market St. & Penn Plaza (201) 645-6214.

Omaha, Neb., 68102, 1815 Capitol Ave., Suite 703A (402) 221-3665.

Philadelphia, 19106, 9448 Federal Bldg., 600 Arch St. (215) 597-2850.

Phoenix, Ariz., 85004, 508 Greater Arizona Savings Bldg., 112 N. Central Ave. (602) 261-3285.

Pittsburgh, 15222, 2002 Federal Bldg., 1000 Liberty Ave. (412) 644-2850.

Portland, Ore., 97204, Room 618, 1220 S.W. Third Ave. (503) 221-3001.

Reno, Nev., 89502, 2028 Federal Bldg. 300 Booth St. (702) 784-5203.

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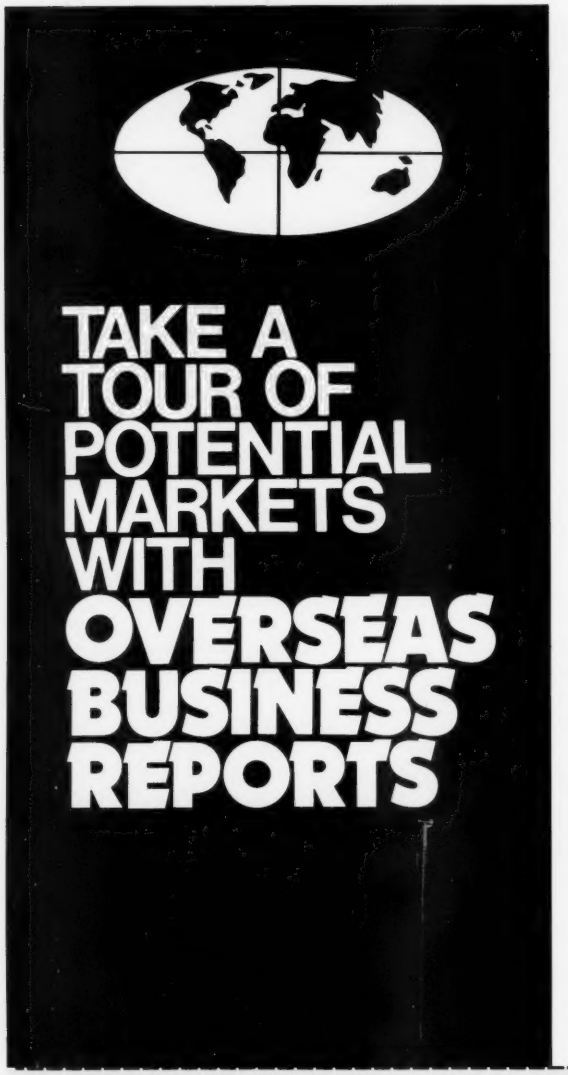

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